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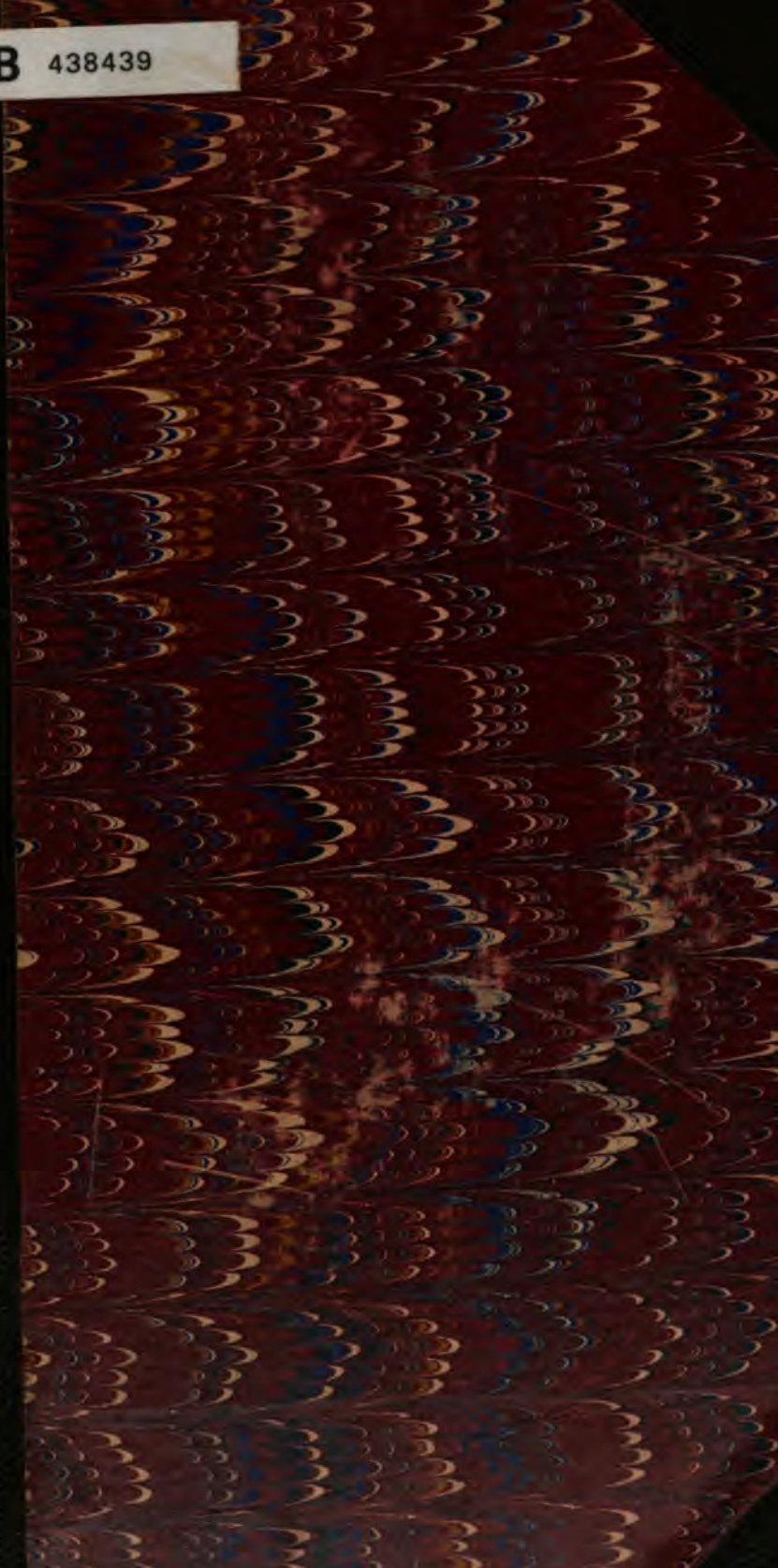
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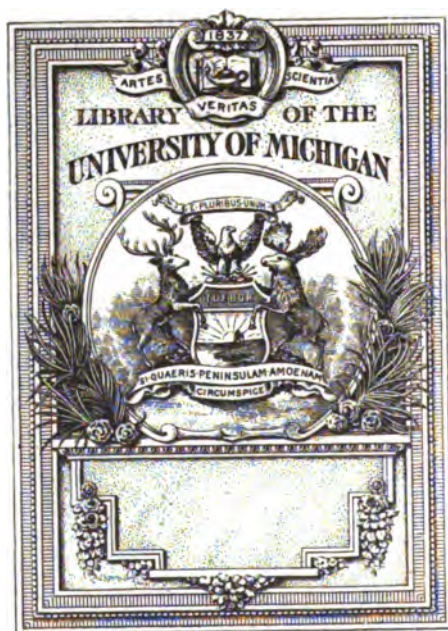
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Full directions for binding the Consular Reports are given in No. 131, page 663.

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

These estimates "are to be taken (by customs officers) in computing the value of all foreign merchandise made out in any of said currencies, imported into the United States."

The following statements, running from January 1, 1874, to October 1, 1898, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account that the ruble of Russia, for instance, has fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, and 1882 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz, (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic*.	Gold and silver..	Peso.....	\$0.96,5	Gold—Argentine (\$4.82,4) and $\frac{1}{2}$ Argentine; silver—peso and divisions.
Austria-Hungary†.....	Gold	Crown.....	.20,3	Gold—20 crowns (\$4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver— $\frac{1}{2}$, 1, and 2 milreis.
British North America (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do .....	.....do	1.00	
Chile.....	.....do	Peso.....	.36,5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.
Cuba	Gold and silver..	.....do .....	.92,6	Gold—doubloon (\$5.01,7); silver—peso.
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	.....do	Pound (100 plasters).	4.94,3	Gold—10, 20, 50, and 100 plasters; silver—1, 2, 10, and 20 plasters
Finland.....	.....do	Mark.....	.19,3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling...	4.86,6 $\frac{1}{2}$	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti .....	.....do	Gourde.....	.96,5	Silver—gourde.
Italy.....	.....do	Lira.....	.19,3	Gold—5, 10, 20, 50, and 100 lire silver—5 lire.
Japan‡	Gold	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia .....	.....do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin .....	.40,2	Gold—10 florins; silver— $\frac{1}{2}$, 1, and 2 $\frac{1}{2}$ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—\$2 (\$2.02,7).
Portugal.....	.....do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia ¶.....	.....do	Ruble.....	.51,5	Gold—imperial (\$7.718) and $\frac{1}{2}$ imperial (\$3.80); silver— $\frac{1}{4}$, $\frac{1}{2}$, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Plaster.....	.04,4	Gold—25, 50, 100, 200, and 500 plasters.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed in the Argentine Republic.

† On reference to the table of "fluctuating currencies," it will be seen that Austria had the silver standard up to and including the quarter ended July 1, 1892. The next quarter (October 1) inaugurated the gold standard (see note under table of "fluctuating currencies").

‡ For particulars as to the change from silver to the gold standard, see CONSULAR REPORTS No. 201, p. 359.

§ The Netherlands florin, as will be seen in the "fluctuating" table, became fixed in value (40.2 cents) in 1880.

¶ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—Countries with fluctuating currencies, 1874-1890.

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*.	Silver.....	Florin.....	\$0.47,6	\$0.45,3	\$0.45,3	\$0.41,3	\$0.40,1	\$0.39,8
Bolivia.....	do.....	Dollar until 1880; boliviano thereafter.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America.....	do.....	Peso.....	.96,5	.91,8	.91,8	.83,6		
China.....	Silver.....	Haikwan tael.	1.61	1.61				
Colombia.....	do.....	Peso.....	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador.....	do.....	do.....	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†.....	Gold.....	Pound (100 piasters).			4.97,4	4.97,4	4.90	4.90
India.....	Silver.....	Rupee.....	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan.....	Gold.....	Yen.....	.99,7	.99,7	.99,7	.99,7		
	Silver.....	do.....					.87,6	.86,9
Mexico.....	do.....	Dollar.....	1.04,7‡	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands§.....	Gold and Silver.	Florin.....	.40,5	.38,5	.38,5	.40,2		
Peru.....	Silver.....	Sol.....	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia.....	do.....	Ruble.....	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli.....	do.....	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*.	Silver.....	Florin.....	\$0.39,3	\$0.37,1	\$0.35,9	\$0.34,5	\$0.33,6	\$0.42
Bolivia.....	do.....	Dollar until 1880; boliviano thereafter.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America.....	do.....	Peso.....				.69,9	.68	.85
Colombia.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†.....	Gold.....	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India.....	Silver.....	Rupee.....	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan.....	Gold.....	Yen.....			.99,7	.99,7	.99,7	.99,7
	Silver.....	do.....	.85,8	.81	.78,4	.75,1	.73,4	.91,7
Mexico.....	do.....	Dollar.....	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru.....	Silver.....	Sol.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia.....	do.....	Ruble.....	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli.....	do.....	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at \$4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—Quarterly valuations of fluctuating currencies.

Countries.	Monetary unit.	1895.				1896.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.....	\$0.45,5	\$0.44,1	\$0.48,6	\$0.48,6	\$0.49,1	\$0.49,3	\$0.49,7	\$0.49
Central Amer- ica.	Silver peso.....	.45,5	.44,1	.48,6	.48,6	.49,1	.49,3	.49,7	.49
China.....	Amoy tael.....								.79,3
	Canton tael.....								.79
	Chefoo tael.....	.70,4	.68,3	.75,1	.75,2	.75,9	.76,3	.76,9	.75,8
	Chinkiang tael.....								.77,4
	Fuchau tael.....								.73,3
	Haikwan tael.....	.74,9	.75,6	.80	.80	.80,8	.81,2	.81,9	.80,6
	Hankau tael.....								.74,2
	Ningpo tael.....								.76,2
	Niuchwang tael.....								.74,3
	Shanghai tael.....	.67,3	.65,2	.71,8	.71,8	.72,5	.72,9	.73,5	.72,4
	Swatow tael.....								.73,2
Colombia.....	Takao tael.....								.79,8
	Tientsin tael.....	.71,4	.69,2	.76,1	.76,2	.76,9	.77,3	.78	.76,8
Ecuador.....	Silver peso.....	.45,5	.44,1	.48,6	.48,6	.49,1	.49,3	.49,7	.49
India.....	do.....	.45,5	.44,1	.48,6	.48,6	.49,1	.49,3	.49,7	.49
Japan.....	Silver rupee.....	.21,6	.21	.23,1	.23,1	.23,3	.23,4	.23,6	.23,3
Mexico.....	Silver yen.....	.49,1	.47,6	.52,4	.52,4	.52,9	.53,2	.53,2	.52,8
Persia.....	Silver dollar.....	.49,5	.47,9	.52,8	.52,8	.53,3	.53,6	.54	.53,2
Peru.....	Silver kran.....			.08,9	.09	.09	.09,1	.09,2	.09
Russia.....	Silver sol.....	.45,5	.44,1	.48,6	.48,6	.49,1	.49,3	.49,7	.49
Tripoli.....	Silver ruble.....	.36,4	.35,3	.38,9	.38,9	.39,3	.39,5	.39,8	.39,2
	Silver mabbub.....	.41,1	.39,8	.43,8	.43,8	.44,3	.44,5	.44,9	.44,2

Countries.	Monetary unit.	1897.				1898.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.....	\$0.47,4	\$0.46,8	\$0.44,3	\$0.41,2	\$0.42,4	\$0.40,9	\$0.41,8	\$0.43,6
Central Amer- ica.	Silver peso.....	.47,4	.46,5	.44,3	.41,2	.41,4	.40,9	.41,8	.43,6
China.....	Amoy tael.....	.76,7	.75,7	.71,7	.66,4	.68,5	.66,2	.67,6	.70,6
	Canton tael.....	.76,5	.75,5	.71,5	.66,4	.68,3	.66	.67,4	.70,4
	Chefoo tael.....	.73,3	.72,4	.68,6	.63,7	.65,5	.63,3	.64,6	.67,5
	Chinkiang tael.....	.74,9	.73,9	.70	.65,1	.66,9	.64,6	.66	.69
	Fuchau tael.....	.70,9	.70	.66,3	.61,6	.63,4	.61,2	.62,5	.65,3
	Haikwan tael.....	.78	.77	.73,1	.67,8	.69,7	.67,3	.68,8	.71,8
	Hankau tael.....	.71,7	.70,8	.67,1	.62,3	.64,1	.61,7	.63,2	.66
	Ningpo tael.....	.73,7	.72,8	.68,9	.64	.64,3	.63	.65	.67,9
	Niuchwang tael.....	.71,9	.71	.67,2	.62,5	.65,9	.62	.63,4	.66,2
	Shanghai tael.....	.70	.69,1	.65,5	.60,8	.62,6	.60,4	.61,7	.64,5
	Swatow tael.....	.70,8	.69,9	.66,2	.61,5	.63,3	.61,1	.62,4	.65,2
Colombia.....	Takao tael.....	.77,2	.76,2	.72,2	.67	.66	.66,6	.68	.71
	Tientsin tael.....	.74,3	.73,4	.69,5	.64,6	.66,4	.64,1	.65,5	.68,4
Ecuador.....	Silver peso.....	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
India.....	do.....	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
Japan.....	Silver rupee.....	.22,5	.22,2	.21,1	.19,6	.20,1	.19,1	.19,9	.20,7
Mexico.....	Silver yen.....	.51,1	.50,5						
Persia.....	Silver dollar.....	.51,5	.50,8	.48,2	.44,6	.46	.44,4	.45,4	.47,4
Peru.....	Silver kran.....	.08,7	.08,6	.08,2	.07,6	.07,8	.07,5	.07,7	.08
Russia.....	Silver sol.....	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
	Silver ruble.....	.37,9	.37,4						

*The value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude.....	Portugal.....	4.422 gallons.
Ardeb.....	Egypt.....	7.6907 bushels.
Arc.....	Metric.....	0.02471 acre.
Arobe.....	Paraguay.....	25 pounds.
Arratel or libra.....	Portugal.....	1.011 pounds.
Arroba (dry).....	Argentine Republic.....	25.3175 pounds.
Do.....	Brazil.....	32.38 pounds.
Do.....	Cuba.....	25.3664 pounds.
Do.....	Portugal.....	32.38 pounds.
Do.....	Spain.....	25.36 pounds.
Do.....	Venezuela.....	25.4024 pounds.
Arroba (liquid).....	Cuba, Spain, and Venezuela.....	4.263 gallons.
Arshine.....	Russia.....	28 inches.
Arshine (square).....	do.....	5.44 square feet.
Artel.....	Morocco.....	1.12 pounds.
Baril.....	Argentine Republic and Mexico.....	20.0787 gallons.
Barrel.....	Malta (customs).....	11.4 gallons.
Do.....	Spain (raisins).....	100 pounds.
Berkovets.....	Russia.....	361.12 pounds.
Bongkal.....	India.....	832 grains.
Bouw.....	Sumatra.....	7,096.5 square meters.
Bu.....	Japan.....	0.1 inch.
Butt (wine).....	Spain.....	140 gallons.
Caffiso.....	Malta.....	5.4 gallons.
Candy.....	India (Bombay).....	529 pounds.
Do.....	India (Madras).....	500 pounds.
Cantar.....	Morocco.....	113 pounds.
Do.....	Syria (Damascus).....	575 pounds.
Do.....	Turkey.....	124.7036 pounds.
Cantaro (cantar).....	Malta.....	175 pounds.
Carga.....	Mexico and Salvador.....	300 pounds.
Catty.....	China.....	1.333 $\frac{1}{3}$ (1 $\frac{1}{3}$) pounds.
Do *.....	Japan.....	1.31 pounds.
Do.....	Java, Siam, and Malacca.....	1.35 pounds.
Do.....	Sumatra.....	2.12 pounds.
Centaro.....	Central America.....	4.2631 gallons.
Centner.....	Bremen and Brunswick.....	117.5 pounds.
Do.....	Darmstadt.....	110.24 pounds.
Do.....	Denmark and Norway.....	110.11 pounds.
Do.....	Nuremberg.....	112.43 pounds.
Do.....	Prussia.....	113.44 pounds.
Do.....	Sweden.....	93.7 pounds.
Do.....	Vienna.....	123.5 pounds.
Do.....	Zollverein.....	110.24 pounds.
Do.....	Double or metric.....	220.46 pounds.
Chih.....	China.....	14 inches.

* More frequently called "kin." Among merchants in the treaty ports it equals 1.33 $\frac{3}{4}$ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan.....	Sarawak.....	3,098 pounds.
Do.....	Slam (Koyan).....	2,667 pounds.
Cuadra.....	Argentine Republic.....	4.2 acres.
Do.....	Paraguay.....	78.9 yards.
Do.....	Paraguay (square).....	8.077 square feet.
Do.....	Uruguay.....	Nearly 2 acres.
Cubic meter.....	Metric.....	35.3 cubic feet.
Cwt. (hundredweight).....	British.....	112 pounds.
Dessiatine.....	Russia.....	2,6997 acres.
Do.....	Spain.....	1,599 bushels.
Drachme.....	Greece.....	Half ounce.
Egyptian weights and measures.....	(See CONSULAR REPORTS No. 144.)	
Fanega (dry).....	Central America.....	1,5745 bushels.
Do.....	Chile.....	2,575 bushels.
Do.....	Cuba.....	1,599 bushels.
Do.....	Mexico.....	1,54728 bushels.
Do.....	Morocco.....	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do.....	Uruguay (double).....	7,776 bushels.
Do.....	Uruguay (single).....	3,888 bushels.
Do.....	Venezuela.....	1,599 bushels.
Fanega (liquid).....	Spain.....	16 gallons.
Feddán.....	Egypt.....	1.03 acres.
Frail (raisins).....	Spain.....	50 pounds.
Frasco.....	Argentine Republic.....	2,5096 quarts.
Do.....	Mexico.....	2.5 quarts.
Fuder.....	Luxemburg.....	264.17 gallons.
Garnice.....	Russian Poland.....	0.88 gallon.
Gram.....	Metric.....	15.432 grains.
Hectare.....	do.....	2.471 acres.
Hectoliter:		
Dry.....	do.....	2.838 bushels.
Liquid.....	do.....	26.417 gallons.
Joch.....	Austria-Hungary.....	1,422 acres.
Ken.....	Japan.....	6 feet.
Kilogram (kilo).....	Metric.....	2,2046 pounds.
Kilometer.....	do.....	0.621376 mile.
Klafter.....	Russia.....	216 cubic feet.
Koku.....	Japan.....	4,9629 bushels.
Korree.....	Russia.....	3.5 bushels.
Last.....	Belgium and Holland.....	85.134 bushels.
Do.....	England (dry malt).....	82.52 bushels.
Do.....	Germany.....	2 metric tons (4,480 pounds).
Do.....	Prussia.....	112.29 bushels.
Do.....	Russian Poland.....	113½ bushels.
Do.....	Spain (salt).....	4,760 pounds.
League (land).....	Paraguay.....	4,633 acres.
Li.....	China.....	2,115 feet.
Libra (pound).....	Castilian.....	7,100 grains (troy).
Do.....	Argentine Republic.....	1.0127 pounds.
Do.....	Central America.....	1.043 pounds.
Do.....	Chile.....	1.014 pounds.
Do.....	Cuba.....	1.0161 pounds.
Do.....	Mexico.....	1.01465 pounds.
Do.....	Peru.....	1.0143 pounds.
Do.....	Portugal.....	1.011 pounds.
Do.....	Uruguay.....	1.0143 pounds.
Do.....	Venezuela.....	1.0161 pounds.
Liter.....	Metric.....	1,0567 quarts.
Livre (pound).....	Greece.....	1.1 pounds.
Do.....	Gulana.....	1,0791 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Load.....	England (timber).....	Square, 50 cubic feet; unhewn, 40 cubic feet; 1 inch planks, 600 super- ficial feet.
Manzana.....	Costa Rica.....	1½ acres.
Do.....	Nicaragua and Salvador.....	1.727 acres.
Marc.....	Bolivia.....	0.507 pound.
Maund.....	India.....	82½ pounds.
Meter.....	Metric.....	39.37 inches.
Mil.....	Denmark.....	4.68 miles.
Do.....	Denmark (geographical).....	4.61 miles.
Milla.....	Nicaragua and Honduras.....	1.1493 miles.
Morgen.....	Prussia.....	0.63 acre.
Oke.....	Egypt.....	2.7225 pounds.
Do.....	Greece.....	2.84 pounds.
Do.....	Hungary.....	3.0817 pounds.
Do.....	Turkey.....	2.85418 pounds.
Do.....	Hungary and Wallachia.....	2.5 pints.
Pic.....	Egypt.....	21¼ inches.
Picul.....	Borneo and Celebes.....	135.64 pounds.
Do.....	China, Japan, and Sumatra.....	133½ pounds.
Do.....	Java.....	135.1 pounds.
Do.....	Philippine Islands (hemp).....	139.45 pounds.
Do.....	Philippine Islands (sugar).....	140 pounds.
Pie.....	Argentine Republic.....	0.9478 foot.
Do.....	Castile.....	0.91407 foot.
Pik.....	Turkey.....	27.9 inches.
Pood.....	Russia.....	36.112 pounds.
Pund (pound).....	Denmark and Sweden.....	1.102 pounds.
Quarter.....	Great Britain.....	8.252 bushels.
Do.....	London (coal).....	36 bushels.
Quintal.....	Argentine Republic.....	101.42 pounds.
Do.....	Brazil.....	130.06 pounds.
Do.....	Castile, Chile, Mexico, and Peru.....	101.61 pounds.
Do.....	Greece.....	123.2 pounds.
Do.....	Newfoundland (fish).....	112 pounds.
Do.....	Paraguay.....	100 pounds.
Do.....	Syria.....	125 pounds.
Do.....	Metric.....	220.46 pounds.
Rottle.....	Palestine.....	6 pounds.
Do.....	Syria.....	5¾ pounds.
Sagen.....	Russia.....	7 feet.
Salm.....	Malta.....	490 pounds.
Se.....	Japan.....	0.02451 acres.
Seer.....	India.....	1 pound 13 ounces.
Shaku.....	Japan.....	11.9305 inches.
Sho.....	do.....	1 6 quarts.
Standard (St. Petersburg).....	Lumber measure.....	165 cubic feet.
Stone.....	British.....	14 pounds.
Suerte.....	Uruguay.....	2,700 cuadras (see cua- dra).
Sun.....	Japan.....	1.193 inches.
Tael.....	Cochin China.....	590.75 grains (trov).
Tan.....	Japan.....	0.25 acre.
To.....	do.....	2 pecks.
Ton.....	Space measure.....	40 cubic feet.
Tonde (cereals).....	Denmark.....	3.94783 bushels.
Tondeland.....	do.....	1.36 acres.
Tsubo.....	Japan.....	6 feet square.
Tsun.....	China.....	1.41 inches.
Tunna.....	Sweden.....	4.5 bushels.
Tunnland.....	do.....	1.22 acres.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Vara.....	Argentine Republic.....	34.1208 inches.
Do.....	Castile.....	0.914117 yard.
Do.....	Central America.....	32.87 inches.
Do.....	Chile and Peru.....	33.367 inches.
Do.....	Cuba.....	33.384 inches.
Do.....	Curaçao.....	33.375 inches.
Do.....	Mexico.....	33 inches.
Do.....	Paraguay.....	34 inches.
Do.....	Venezuela.....	33.384 inches.
Vedro.....	Russia.....	2.707 gallons.
Verges.....	Isle of Jersey.....	71.1 square rods.
Verst.....	Russia.....	0.663 mile.
Vlocka.....	Russian Poland.....	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
 Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
 Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
 Gram equals 15.432 grains.
 Decagram (10 grams) equals 0.3527 ounce.
 Hectogram (100 grams) equals 3.5274 ounces.
 Kilogram (1,000 grams) equals 2.2046 pounds.
 Myriagram (10,000 grams) equals 22.046 pounds.
 Quintal (100,000 grams) equals 220.46 pounds.
 Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
 Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
 Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
 Liter equals 0.908 quart.
 Decaliter (10 liters) equals 9.08 quarts.
 Hectoliter (100 liters) equals 2.838 bushels.
 Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
 Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
 Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
 Liter equals 1.0567 quarts.
 Decaliter (10 liters) equals 2.6418 gallons.
 Hectoliter (100 liters) equals 26.418 gallons.
 Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
 Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
 Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
 Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.

Hectometer (100 meters) equals 328 feet 1 inch.

Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).

Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.

Are (100 square meters) equals 119.6 square yards.

Hectare (10,000 square meters) equals 2.471 acres.

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TRADE OF THE UNITED STATES WITH CANADA.

In his annual report (to appear in Commercial Relations, 1897-98), Consul-General Bittinger, of Montreal, says, in part:

The course of the trade of the United States with Canada has for some years been one of expansion. Variations in its amount have occurred, owing to tariff changes and the lower or higher capacity of the Canadian people to purchase foreign goods, but these variations have been only temporary in their effect, when they restricted the imports into Canada of goods from the United States.

Separated as the two countries are by only an imaginary line, the most friendly relations should be cultivated between the two people. A year's observation convinces me that the largest reciprocity in trade practicable should be arranged for by mutual reductions of duties on many articles.

The United States duty on lumber, hay, live stock, and barley is well-nigh prohibitory. This in a great measure restricts trade and turns away many purchasers of American goods. It is more convenient for Canadians to purchase in the United States than from any other country; but to obtain their custom to the fullest extent, they must be allowed to enter their products into our markets without excessive duty. By a larger reciprocity, I feel confident the United States would be greatly the gainer.

A comparison of the statistics of imports of manufactured goods from the United States into Canada, from 1893 to the close of the last fiscal year, ending June 30, 1898, with the statistics of imports from Great Britain into Canada for the same period, shows with striking clearness the fact that the United States has been gradually but

steadily capturing more and more of this trade, while Great Britain during the same period has been losing its hold.

The following is a list of the goods imported from Great Britain into Canada, the import of which in 1897 was less than in 1893, while the import of the same class of goods from the United States exceeded that of 1893:

Articles.	Increase of imports from United States into Canada in 1897 over 1893.	Decrease of imports from Great Britain in 1897 below 1893.
Braces and brushes.....	\$18,500	\$7,500
Carpets	31,000	44,000
Carriages	1,300,000	131,000
Watches and cases.....	110,700	8,300
Cordage.....	54,000	35,600
Cotton goods.....	15,000	752,000
Glass and crockery.....	37,000	138,000
Hats, caps, etc.....	176,000	265,000
Jewelry, etc.....	74,000	32,000
Agricultural implements.....	356,000	3,300
All other iron goods.....	1,541,000	3,613,000
Tin goods.....	61,000	103,000
Sundry metal goods....	310,000	323,000
Scientific instruments.....	2,900	37,000
Paints and colors.....	76,000	79,000
Silks and ribbons.....	34,400	146,400
Dress and piece goods.....	31,000	171,100
Umbrellas	800	173,000
Wood, and manufactures of.....	735,000	30,000
Wool and woollen goods.....	18,000	4,438,600

The above list practically includes the great bulk of the manufactured goods imported into Canada from the United States and Great Britain. It shows in what classes of goods the American manufacturer has been successful in his competition with the manufacturers of Great Britain in the markets of Canada. In builders' and cabinetmakers' hardware, the goods made in the United States have almost achieved a monopoly, as have also brass tubing and other brass goods. This has resulted from the fact that our manufacturers have made a close study of the tastes and requirements of the Canadian consumer. Canadian dealers show their appreciation of United States goods by confining their imports to them. It is the opinion of importers of such goods from the United States as come more or less into competition with those from Great Britain, that the discrimination in favor of British goods of a 25 per cent reduction in duty will have only a trifling effect, if any at all, upon the volume of imports from the United States.

Canadian consumers of the leading articles made of iron or steel, or a combination of them, and of other metallic goods, show

such a decided preference for those made in the United States that they will not take British goods, even if the preferential duty cause them to be proportionately lower in price. At the same time, they consider it would be well for United States manufacturers to avoid presuming upon the advantage they have acquired, by indifference to the quality of the goods they send to Canada, by less careful packing, or by neglecting to keep in close and constant touch with importers, whose ideas as to local tastes and requirements should be carefully studied and as far as possible met. Although the present tariff in favor of British goods is not sufficient to change the current of trade, to any marked extent, from the United States to Great Britain, a much greater reduction of the duty on British goods might have some effect in that direction, especially if British manufacturers awoke to the necessity of catering more skillfully to the needs of the Canadian consumers. The possibility of such changed conditions arising needs to be considered by United States manufacturers, who will show wisdom in preparing to meet a more active competition from British-made goods that may arise in the future. The more thoroughly we satisfy the Canadian importers in quality, price, terms, and other details, the more assured will be the prospect of our keeping and advancing our hold on the Canadian market.

In all articles of clothing, such as costumes made up, etc., there is a likelihood of the imports from Great Britain developing considerably. A large trade in this class of goods could be done, if prices could be fixed at a moderate percentage in excess of those made in England.

Although in the article of bells the United States has made great advances, there is great room for improvement, a preference still being given by some buyers to bells cast in England.

In the line of scissors, English goods are preferred, and if this class of articles is ever to be supplied on a larger scale from United States factories, there will require to be close attention paid to the patterns and the qualities of those made in England, which now hold this market.

Pocket knives of English make are also preferred, the combination of low prices with excellent quality and attractive patterns giving them an advantage in competition with those of the United States. It may be well to note that in all kinds of edged tools the prime requisite for popularity amongst consumers is good quality, which insures durability and reliability for steady wear, as upon these conditions the earning power of the workmen who use the tools largely depends. It is in many cases impracticable for a workman to exchange a defective tool for a better one, as his work is

being done at a distance from any hardware store; and if he should be unlucky enough to have a bad tool, the mark on it is noted, and both he and his fellow-workmen acquire a prejudice against the goods of that maker, which is difficult to remove. If all edge-tool makers would remember that every tool they turn out will either enhance or damage their reputation, they would take the utmost precautions against allowing an inferior article to be shipped from their factory.

Some retailers are of opinion that brass and iron bedsteads, or those having a combination of these metals, might be made in the United States and imported into this district with a fair profit. The prices of this class of goods here are certainly so much higher than they are in Great Britain that there would seem to be an opening if they can be produced to sell in competition with those made in this district. The matter is worth looking into. One requisite for success would be the production of a metal bedstead of a more attractive appearance, something in color and design more agreeable to the eye than the ordinary goods, the patterns of which are very old fashioned and their appearance not pleasing as articles of furniture.

WOOD PULP AND PAPER.

The wood-pulp and paper industry of this province, and in fact throughout the whole of the Dominion of Canada, started only a few years ago, is advancing with giant strides. English and Canadian syndicates are being organized, with immense capital, to erect new mills and purchase vast areas of spruce timber lands. The extent of the pulp-wood resources of this country is enormous. From Hamilton Inlet, on the northeast coast of Labrador, one might travel southwest around James Bay and then northwest to the valley of the Yukon River and never in that great distance be out of the region of spruce forests. Or a journey might begin near the southern boundary of New Brunswick and continue northwest to Portland Promontory, more than halfway up the east coast of Hudson Bay, and thence across the country again in an easterly direction to Ungava Bay, and still the traveler would never be out of a spruce-bearing territory. In these vast reserves of spruce timber, many citizens of the United States have already secured large holdings and are engaged in the pulp industry, and the water power utilized in connection therewith is unsurpassed in the world. By far the greater part of the product of the pulp mills now goes to the United States, but England is beginning to stretch out eager hands to lay hold of a share of it. The consumption of paper is greater in the United States than in any other nation on earth. That our country

may continue to be benefitted by receiving a supply of pulp from Canada, many who have given careful attention to the matter contend that the duty now imposed by the United States for the importation of pulp should be materially lowered.

POSTAGE RATES.

Canada is about to make an important change in her postage rates. After the 25th of December next, there will be three rates of postage on letters, viz, 2 cents for Great Britain and her colonies, 3 cents for Canada and the United States, and 5 cents for foreign countries. If the experiment proves satisfactory, the postmaster-general, it is understood, will then reduce letter postage in Canada and to the United States to 2 cents.

The post-office department has recently sent to all newspaper offices throughout the Dominion a circular telling publishers that after the 1st of January postage at the rate of one-fourth of a cent per pound will be imposed upon newspapers. After the 1st of July next, the rate will be half a cent per pound.

UNITED STATES GOODS IN BRAZIL.

In his annual report, which will be printed in Commercial Relations, 1897-98, Consul Clark, of Pernambuco, says:

If properly handled, United States goods will constitute a large share of the imports into Brazil. There are many openings for textiles, hardware, nails, etc. My attention has been called to the necessity of making hinges of a style desired and used in this country. Agricultural machinery should be brought here and introduced by competent people. Our bicycles are being introduced, and all prefer them, though the roads are in such bad condition that there can be no extensive use in this district. Small hardware is in demand, but must be made to suit the trade and well put up in proper packages.

This is an opportune time for the introduction of United States textiles, dealers preferring them to all others, even on thirty days' credit, as against four months from Europe. A concession in this direction would work well.

Our boots and shoes are in demand, particularly for women and children. There is a good opportunity for the introduction of our files and saws, which come here now through English houses.

The chance for American coal was never better, but it should be screened. Spruce and hard-pine lumber, suitable for packing cases and boxes, is in great demand.

The extension of a parcel-post system to this country would be a

great boon and open up new lines of trade. There should be increased care in attending to orders and having them properly packed, so that the goods will not arrive damaged. The contents and weight of each package should be carefully noted and goods packed in as light packages as possible, as duties are paid on the gross weight.

Trade is best managed by having experienced commercial travelers, who can speak the Portuguese language, make trips about six months apart, and by paying strict attention to their orders and directions. Usually "something just as good or similar" will not please this people. The lack of a very small and apparently insignificant part of a machine renders the whole thing useless, and sometimes three to six months are necessary to replace it. These things should be kept constantly in mind, and the greatest care exercised to see that each shipment is complete in itself.

OPENING FOR AMERICAN GOODS IN SCOTLAND.

In a recent conversation, a business man of Edinburgh, who has a thorough knowledge of the industries of the United States as well as of his own country, and whose opinion in regard to the chances for any line of foreign manufactures to find a market in Scotland is valuable, said:

America sells here, in addition to food products, large quantities of typewriters, bicycles, farm machinery and implements, heavy electrical machinery, and a variety of other things which I can not now enumerate. It would seem easy for American manufacturers to increase the list of exports to this country. I have long thought that the harness-making establishments on the other side are neglecting their opportunities by not giving proper attention to this market. We have no big plants in this branch of industry. Our factories are small concerns. The output of each is only a handful in comparison with the product of one of the huge factories in the United States. If labor is cheaper here, the American harness manufacturers have the advantage of better machinery and an enormous home market which warrants production on a great scale and which should enable them to dispose of the surplus abroad at prices lower than the factories in Scotland can afford to charge for goods at home. The factories in Scotland and England make good harness. No fault can be found with the quality or style; but I know enough about the harness made in the United States to say that in quality and style it equals anything we turn out. If this trade were pushed, I am confident that it would soon become a very considerable item in the business of the American manufacturers of harness. The sales now amount to something, but as yet your people are only on the edge of the market, so to speak.

In another direction, there are here opportunities lying open to American enterprise. I refer to certain house furnishings and fittings. Look at our doorknobs, locks, keys, and hinges. They are below the standard of utility and convenience, and I may say adaptability, which has been attained in the United States in these articles. They are, to use a mild term, clumsy. Our keys especially are out of

date, some of them too heavy to be carried in the pocket. If the manufacturers of such articles in the United States would place their wares before the public over here in the right way—i. e., put them in the hands of the leading dealers and work up the trade—it would not require much time to create a paying market.

The American styles of office desks are ahead of anything of the kind produced in the United Kingdom, and are as well adapted to our professional and business habits and needs as they are to the habits and needs of professional and business men in the United States. Then, too, American carriages and buggies of the better grades ought to have a larger sale in Scotland. They are handsomer than ours, and your superb wood-working machinery and extensive plants in this line of manufacture enable you to offer them in the foreign market at moderate prices.

Allow me to say that some of the American manufacturers seem to have an incurable delusion that a market can be secured by simply sending circulars to foreign dealers. Circulars are useful, no doubt; but the effective method of working up trade in a foreign country, as at home, is the employment of active and alert men to study the trade on the spot, to select firms as agents who know how to handle the wares, and to do whatever may be necessary to bring the articles adequately into notice. Most American manufacturers and exporters are awake to the importance of the personal element in trade. They have learned that to obtain the largest measure of success they must come in touch with the community where customers are sought. Those who are not yet awake to this fact will make slow progress in the foreign field, if they progress at all.

RUFUS FLEMING,
Consul.

EDINBURGH, *November 10, 1898.*

AMERICAN TOOLS AND IMPLEMENTS IN EDINBURGH.

Asked whether or not they handled American wares, one of the members of an Edinburgh wholesale firm dealing extensively in implements and sundry articles of steel, iron, and wood answered: "O, yes; largely; come into our warerooms and see for yourself." Leading the way, he pointed to rows of boxes in the first room we entered, remarking: "These are American axes—the best and the cheapest in the world." Around the wall, standing ten deep, were ranged forks of all descriptions for the farmers' use, and heaped on the floor were thousands of handles for hayforks, hoes, picks, axes, spades, and shovels. Observing a notebook in my hand, he said: "If you put down everything in our place that is American, you will fill the book." This was soon apparent. Going into another room and directing my attention to shelves bending with the weight of packages, and to dozens of boxes at either end, he informed me that this was a recent importation, something new for his firm—10 tons of bolts and nuts from the United States. In every part of the great establishment most of the articles were American made, including hay knives, lawn mowers, saws, files,

wheels, hubs, spokes, rims, spades, shovels, rakes, washing machines, washboards, and wringers. Picking up a turnip hoe, he said:

This is English. We used to get all these hoes from the United States, but the Manchester makers not long ago reduced the price and now have the market. The barbed wire we have in stock is English, but the American wire is quite as good and as cheap. The American lawn mower is lighter and better than anything of the kind made on this side. In fact, nearly all implements produced in the United States are superior to ours, and many of them can be sold here at lower prices.

On the same street is a merchant having the largest stock of tools and mechanical novelties in the city. Here I found American-made auger bits, angular bitstocks, bench screws, hand stops and vises, bicycle wrenches, hones, brackets, breast drills, expansive bits, block planes, bull-nose planes, carpet stretchers, saws of all kinds, glass cutters, hammers, hatchets, hand beaders, hand drills, lathe chucks, oilstones, plane irons, ratchet braces, ratchet screw-drivers, spiral screw-drivers, shears, iron spoke shaves, squares, tool handles, wing compasses, chisels, etc. American tools are preferred by workmen to either English or German. They are tempered harder, are more serviceable, and have a finish that is lacking in the others. Tools of German make are somewhat cheaper, but are softer and do not stand use as well as the American. Moreover, dealers in all sorts of goods frankly say that there is just now a lively prejudice here against anything German.

Workmen do not readily "take to" combination tools. They prefer the single tool, failing to appreciate the convenience of a combination device which occupies less space and weighs much less than the two or three tools it represents. Doubtless they will, after a while, see the advantages of the new space-saving and time-saving devices, some of which are marvels of ingenuity.

RUFUS FLEMING,

EDINBURGH, *October 24, 1898.*

Consul.

UNITED STATES AGRICULTURAL MACHINERY IN SCOTLAND.

American-made agricultural machinery is widely used on the farms of Scotland. Most kinds of machinery for farm purposes manufactured in the United States have long been preferred by farmers here, on account of price, quality, and design. While the obvious merits of their machines have been the essential recommendation, it is nevertheless true that American manufacturers in this line have obtained the market by the readiness with which they met the special requirements of the Scotch farmer. They adapted their machinery to the market. I refer to Scotland in particular, but the same thing may be said generally of the United Kingdom.

The old-style American reaper or harvester cut on the right side. This did not suit the Scotch farmer; he wanted a machine that cut on the left side. Therefore, he would not buy the American machine, and the English-made reaper was practically without a competitor. When the self binder was invented, it commended itself at once as a labor-saving device, besides cutting on the left side; but it encountered difficulties in Scotch fields. There is here a heavier stand of grain than in most parts of the United States. Moreover, the farmers sow grass seed with the barley, so that after the barley has been cut the sheep may feed on the field. This grass is exceedingly fine and also dense. The new reaper was a failure at first, owing chiefly to the fact that the undergrowth of grass in the barley interfered with its working. The blade of the machine was too light, and the canvases were not properly adjusted. No sooner were these defects—from the Scotch point of view—ascertained, than a heavier blade was introduced and the canvases were altered. In less than two years, the American self binder was an established favorite; it still holds the market. British manufacturers of reaping machines have not been able to make any headway against it.

The chilled plow was not at first suited to the needs of Scotch farmers. They prefer a narrow furrow and do not deem it a good plan to throw the furrow over; they wish, rather, to set it on edge. The plow was changed to meet their ideas as to the proper way to turn up the ground, and the result was that the American plow has gained almost universal favor.

American farm machinery of nearly every description has had to be altered in some important respects to adapt it to the different conditions found here. Most manufacturers have been quick to make the necessary changes, and their enterprise has been abundantly rewarded. Not only are there great and increasing sales annually of these classes of machinery, but any new American invention is readily taken up by the farmers on this side.

Self binders and chilled plows have been mentioned as instances where our manufacturers have captured the Scotch market by considering the needs of the consumer. Thrashing machines may be mentioned as an instance of the failure of American manufacturers thus far to exactly meet the requirements of farmers in this country. Owing to the rank growth and humid atmosphere, the weight of straw (and of grass mixed with it) to be thrown off is much greater than is the case in the United States. A much heavier and stronger machine is necessary for general use. It has not yet been provided by American manufacturers.

RUFUS FLEMING,
Consul.

EDINBURGH, *November 3, 1898.*

BUILDING INDUSTRY OF NICE: MARKETS FOR AMERICAN PRODUCTS.*

From the 1st of September, 1897, to the 1st of September, 1898, eighty new buildings have been erected in this city, at a cost of about 3,650,000 francs (\$704,450). These buildings consist of the usual medium-sized villas, the number of which is constantly increasing in the newer quarters of the town, and the usual apartment houses of four or five stories. All, without exception, are built of stone, the exteriors finished in plaster or cement, or, in a few cases, in stone.

In view of the fact that the prices differ materially from those in other parts of France, and that they may serve as a guide as to American products which might be exported to Nice, I think it desirable to append the following quotations:

Wages.

Workmen.	Wages.	
	<i>Francs.</i>	
Superintending mason.....per hour...	0.50	\$.096
Mason:		
First class.....do.....	.48	.092
Second class.....do.....	.43	.082
Laborers.....do.....	0.27 to .30	\$.052 to .057
Youths.....do.....	.19	.036
Stonecutters:		
First class.....do.....	.70	.135
Second class.....do.....	.60	.115
Superintending carpenter.....do.....	1.05	.202
Carpenter:		
First class.....do.....	.80	.154
Second class.....do.....	.55	.106
Plasterer:		
First class.....do.....	.81	.156
Second class.....do.....	.58	.112
Apprentice.....do.....	.29	.056
Marble cutters (10 hours per day).....per day...	6.00	1.158
Marble polishers (10 hours per day).....do.....	5.00	.965

Prices of materials.

Articles.	Price.	
	<i>Francs.</i>	
Fir:		
From the neighborhood.....per cubic meter †...	50.00 to 55.00	\$9.65 to \$10.615
From the Tura.....do.....	65.00 to 75.00	12.545 to 14.475
Oak:		
From Bourgogne.....do.....	17.00	3.281
From Hungary.....do.....	200.00	38.60
Chestnut.....do.....	100.00	19.30
Pitch pine.....do.....	75.00 to 85.00	14.475 to 16.40
Native pine.....do.....	42.00	8.106
Walnut.....do.....	120.00 to 150.00	23.16 to 28.95

*In transmitting this report, the consul gives credit to Mr. Piatti, the vice-consul, for assistance rendered.

†1 cubic meter=35.3166 cubic feet.

Prices of materials—Continued.

Articles.	Price.	
Woods sawn and grooved for floors, etc.:		
Fir—	<i>Francs.</i>	
Native.....per cubic meter...	90.00 to 100.00	\$17.37 to \$19.30
From Tura.....do.....	108.00 to 120.00	20.844 to 23.16
Pitch pine.....do.....	120.00 to 140.00	23.16 to 27.02
Hydraulic lime (various qualities).....per 1,000 kilograms *...	16.00 to 32.00	3.088 to 6.176
Sand (various qualities).....per cubic meter.....	3.25 to 6.00	.627 to 1.158
Gravel (various qualities).....do.....	3.00 to 6.00	.579 to 1.158
Plaster:		
Native gray.....per 1,000 kilograms...	10.50	2.026
Native white.....do.....	45.00	8.685
White, from Marseilles.....do.....	55.00	10.615
Cement:		
Artificial (native).....do.....	53.00	10.229
Portland No. 2.....do.....	40.00	7.72
Various qualities.....do.....	32.00 to 70.00	6.176 to 13.51
Bricks:		
Hollow (various dimensions).....per 1,000...	25.00 to 90.00	4.825 to 17.37
Solid (various dimensions).....do.....	38.00 to 65.00	7.334 to 12.545
Polished.....do.....	80.00 to 90.00	15.44 to 17.37
Fire proof.....do.....	60.00 to 70.00	11.58 to 13.51
Special qualities, from Marseilles.....do.....	200.00 to 300.00	38.60 to 57.90
Tiles:		
For roofs (terra cotta, from Marseilles).....do.....	85.00 to 95.00	16.405 to 18.335
For pavements (various qualities and dimensions).....do.....	41.00 to 75.00	7.913 to 14.475
Tubes (terra cotta, various lengths and dimensions).....each....	.45 to 1.50	.086 to .289

* 1,000 kilograms=2,204.6 pounds.

The architectural exteriors of the buildings are, as a rule, though perhaps monotonous, pleasing to the eye. The interiors, however, are thrown together with an utter disregard for variety, utility, and artistic effect. It may justly be said that a villa costing, say, from \$3,000 to \$8,000 is a century behind the majority of our American suburban houses. To bear out my assertion, I need only say that several prominent native architects were profoundly astonished upon being shown the printed plans of an American architect—all of cheap houses. To see one ordinary medium-sized villa is to see them all. In many cases, the entrance to the kitchen is directly opposite to the main entrance, and sometimes one is compelled to pass before the kitchen door in going from the drawing-room to the dining room. Folding doors or arches between rooms are quite unknown, with the result that one seldom finds a series of rooms capable of being connected. In many cases, stairways and halls are so arranged as to preclude the possibility of giving space or effect to rooms.

My object in mentioning these features is to lead up to the question of modern improvements, which are almost unknown, and to mention in detail such American manufactures as might under favorable conditions come into vogue in connection with the building industry. For instance, apartments and houses in Nice are, as a rule,

quite devoid of anything like a bathroom. Often a room of very generous dimensions is left to be used as a bathroom, but it is conspicuous for the absence of a bath. I do not know of an apartment or house having hot and cold water throughout, the hot water to be furnished by a kitchen range. This is the more remarkable in a climate where even exterior water pipes never freeze, and where the fitting in of such an appliance would be extremely simple and inexpensive. Hardware used in building is, as a rule, cumbersome, primitive, and unsightly. Locks and keys are wonderfully behind the times. Interior doors are light, monotonous as to design and paneling, and often made of unseasoned wood, which causes them to warp very soon. Appliances for proper and economical heating are almost unknown, though they would seem indispensable in a climate which, while not extremely cold in winter, is very humid, owing to the heavy dew which falls between 4 and 7 p. m., and where there is a large amount of stone used in construction, besides marble staircases and terra cotta floors. The cooking stoves and ranges (when they are found in apartments) are of such inferior quality and consume such enormous quantities of coal (which costs about \$9 per ton) that gas is greatly preferred. Heating stoves are generally considered unhealthy, an opinion which I claim to be due to their inferior and defective construction. Stoves of all sorts are unsightly, and an average-sized kitchen or heating stove costs from \$30 to \$70. For fitting up a bathroom with the cheapest type of French enameled iron bath, with a gas heating apparatus, \$150 is asked. I have seen enameled iron baths imported from England for which \$60 are asked. A French bath of hammered copper, nickel plated, costs \$160.

During the past three years, there has been a marked increase in the importation of English goods, and in many lines I think our manufacturers might compete. It would perhaps be of service to send here American publications on architecture and interior decoration. There appears to be an opening for stoves, especially those adapted to burn wood alone or wood or coal; for locks and keys; for baths and bathroom appliances; and for building hardware in general. Recently, a shopkeeper here had his ceiling done over at a cost of \$110, which included a very insignificant cornice. I calculated that he might have had a steel ceiling laid down here for \$70. Mantels are of white or colored marble and resemble those in vogue in New York between 1850 and 1865. There is a tendency to discard the cold tiled floor for wood, and American machine-made and cut-wood floors ought to compete. I am informed that an ordinary single door, $1\frac{1}{4}$ inches thick, with panels (four) three-fourths of an inch thick, costs about \$4. Window frames are calculated at 8

francs (\$1.544) the square meter (10.7642 square feet), outside blinds at 13 francs (\$2.509) the square meter, and inner blinds at 9 francs (\$1.737) the square meter. Estimates are made by calculating the surface of the window at 28 francs (\$5.404) the square meter. A Turin manufacturer of enamel paint, said to resist heat and acids, has succeeded in establishing a trade here. Sanitary water-closet appliances are imported from England, and appear to hold their ground successfully against French articles. Pitch pine is used in considerable quantities here, but seldom for doors, windows, or wainscoting. It appears to me that manufacturers of wainscoting, moldings, and trimmings of wood, sawed and pressed, might, with some chance of success, send catalogues and prices to the principal lumber merchants and architects. United States houses should in all cases quote their lowest export prices, and mention the rates of freight to Marseilles and Genoa by the German lines which have connections with Nice. This is a simple matter to ascertain, and is indispensable in calculating the total cost of goods laid down here.

HAROLD S. VAN BUREN,

NICE, *October 13, 1898.*

Consul.

AMERICAN GOODS IN MUNICH.

Consul Pierie writes from Munich, October 28, 1898:

There is a large business in the manufacturing centers of Germany in iron pipes, fittings of all kinds, valves, and engineers' supplies in general. A representative of a number of American manufacturers of the above articles now traveling in Europe reports large sales in Munich and several other German cities. The American methods which have produced hundreds of very successful salesmen in the United States will fail in Europe, where business is far more methodical and access to buyers much more difficult. By far the best plan is to make engagements with the buyer ahead of time. This is usually easy to do. Once the buyer is reached, the salesman has only to sink his and his firm's identity, and admit that the buyer "knows it all." If these points are carefully watched, the actual sale of goods is not difficult. Credits are not necessary. Houses that demand long credits are undesirable, as the great majority are willing to pay cash, if inducements are offered.

Letters and circulars from American manufacturers seem to be increasing at this consulate every day, which shows a disposition on the part of American business houses to find a market for their goods in continental Europe. Munich is increasing in population very rapidly, having at the present time 430,000 inhabitants. It seems to be

a first-class field for an enterprising American manufacturer. I think there is a good market in southern Germany for boots and shoes, labor-saving machinery of all kinds, and chairs, particularly rocking-chairs. I have not seen one of the latter in this city. Canned goods of all kinds from the United States appear to be in fair demand here, and I think quite a large business could be done in this line of goods with proper effort.

ENGLISH AND AMERICAN MACHINES IN GERMANY.

England has a large export trade in machinery with this Empire, more than half of the machines sent going into the textile mills. In 1897, machinery to the value of £1,809,871 (\$8,807,737) was received from England. Of this £216,759 (\$1,054,858) were for steam engines, £913,270 (\$4,444,428) for textile machines, £310,996 (\$1,513,462) for agricultural machines, and £173,218 (\$842,965) for sewing machines. Up to last year, the imports constantly increased. The eight months ending August, 1898, show a falling off. This is due to Germany's increased capacity to furnish her own needs, and to the rapidly gaining American competition. The United States is sending large quantities of machinery to Europe, particularly to this Empire. If its capacity to compete with England and Germany continues to increase, it must soon hold the upper hand in these markets. In the eight months ended August 31, 1898, England sent 28,287 tons, against 29,719 tons in 1897; the United States sent 16,190 tons in 1898 and 9,240 tons in 1897.

Thus United States exports to this Empire, which were only 30 per cent as large as England's in 1897, were 60 per cent in 1898. We can count upon our being able to compete permanently, if we only adopt what is good in the working methods of others.

Chemnitz, Saxony's chief machine-building city, is engaged in a laudable effort to supply not only this Empire's needs, but to export to markets once held almost exclusively by England. Hundreds of steam engines, sewing machines, looms, mules, etc., are annually exported from this Empire to Russia, the Dutch colonies in the East, Asia, Africa, South America, and our own country. England is finding out that Germany's success is due in a very large degree to her superior technical training, and that of the United States to our native skill in mechanics. Once we add this Empire's system of schools to Nature's endowments, no nation will be able to surpass and few able to equal us.

J. C. MONAGHAN,

CHEMNITZ, *October 18, 1898.*

Consul.

BUTTER AND PORK PRODUCTS IN BOHEMIA.

A recent article in an American newspaper received at this consulate said that the United States Secretary of Agriculture had successfully introduced American butter into Europe.

If the price of American butter sold in Europe is no higher than that of European butter, the former should gradually gain a large sale as its superior quality becomes known. The first day after being made, European butter may seem equal to the American product; but generally by the second or third day it will have an old, strong taste and smell. It may be that the butter is not properly worked, or the difficulty may be due to the practice of keeping cows in barns all the year round, instead of turning them loose in pastures, as is done in the United States.

Table butter sells here at about 30 cents a pound. Cooking butter—which usually contains a small mixture of lard, ostensibly to make it keep longer—sells at a few cents less. There is practically no variation in the price of butter with the different seasons of the year.

The Austrian duty on imported butter is not quite 2 cents a pound—10 florins per 100 kilograms (\$4.20 per 220.46 pounds). The freight per pound from America would probably be no more than the duty. If this be true, the good butter, which sells at an average price of 20 cents a pound or less in the agricultural districts of America, could be sold in Austria at a less price than the native butter.

This is exactly the case with lard at the present time. Both native and American lard are sold in this city. The price of the former is about 15 cents a pound; of the latter, about 12 cents. The American lard is infinitely the better. The duty on lard is higher than on butter, being 16 florins per 100 kilograms (about 3 cents a pound). The same may be said of bacon. The duty is also 16 florins per 100 kilograms. American bacon is sold here for 13 cents a pound; Austrian bacon, from 15 to 20 cents. American bacon is the better.

If American butter can be kept during the time necessary to ship it here, all other circumstances seem to favor its successful introduction into this part of Europe.

FRANK W. MAHIN,

REICHENBERG, *October 11, 1898.*

Consul.

AMERICAN PRODUCTS IN PALESTINE.

Consul Merrill, of Jerusalem, in his annual report, which will appear in full in *Commercial Relations*, 1897-98, says, in regard to the opening for American goods:

A German merchant here imports American tools, but buys them in Hamburg, whence they are reshipped to Yafa (Jaffa). At present, the amount is limited, but he assures me that they are favorably received and that there is an increasing demand for them. He mentions especially machinists', carpenters', and blacksmiths' tools. He also imports some carriage wheels ready made.

This leads me to remark upon a branch of business which ought to be in American hands, namely, carriages and carriage supplies. Ten years ago, there were very few carriages in Jerusalem, but now that the Yafa road is in good condition and the road to Jericho, the Dead Sea, and the Jordan is opened up—also that to Bethlehem and Hebron—there are scores of carriages, and the number is constantly increasing. A carriage road has recently been constructed from Jerusalem to the top of the Mount of Olives (for the German Emperor, it is said), and in a few years one will be built between Jerusalem and Nablous; hence it is reasonable to suppose that the demand for carriages will increase. The carriages should be made in the United States—at least the wheels and running parts—and shipped in that form. Some good workmen should be sent here to establish repair shops, since all work of that kind is done in a rude manner by natives.

No one can say that direct communication with New York by steam would at first be a paying investment, but it would be welcomed by the merchants of this country, and the representatives of the United States in this part of the world see reasons convincing them that the outcome of such an undertaking would in time be highly satisfactory.

Only a few years ago, there was no direct communication by steam between the United States and Egypt; but the North German Lloyd Company made the experiment, and now the steamers between New York and Alexandria are, during the season of travel, frequently crowded with passengers. The success of the enterprise showed that a certain field had previously been unoccupied which was ready to reward anyone who should venture to work it.

Our vice-consul here, who was born in New England, but has lived nearly all his life in this country, is of the opinion that if a purely American store were established in Jerusalem, it would very

soon create a considerable demand for American goods. He believes that such a store would be a profitable investment. It should be stocked with a variety of goods, and reference always had to the actual and possible needs of the people. Jerusalem should have a central store and depot, while branch stores should be established in the principal cities and towns of the province, such as Yafa, Gaza, Hebron, Bethlehem, Nablous, and Salt, which is east of the Jordan. The nature of trade, certainly in the branch stores, would for some years be chiefly a barter trade. Although large fortunes and wealthy firms have in the past been built up in this way, I feel at the same time that this method of creating business is distasteful to great numbers of modern American merchants. My reason for this statement is this: Our manufacturers and merchants have from time to time addressed this consulate relative to the possible introduction here of their specific line of goods, and I have taken pains to inquire and make reports and suggestions as far as was in my power. The replies have been in the curt form, in some instances without any expression of gratitude, "We want only cash orders." My efforts were futile; and it seems to me that I have reason for giving expression to the criticism that "fine clothes, a fine office, fine cigars, and cash orders" illustrate a prevalent style of doing business with too many American firms. The markets of Syria can never be opened or made available by business men of that class, but the men who are willing to do a little mercantile grubbing and pioneering here will after a time largely control the trade of this part of the world.

Such canned goods as corned beef, ham, tongue, salmon, lobsters, oysters, milk, sweet corn, lard, berries and such other fruits as do not grow in Palestine, furniture in pieces to be put together here, window frames, blinds, doors, etc., ought to be sent here from the United States. This is, of course, only a partial list. Personal testimony is to the effect that English-prepared ham, tongue, fruits, and some other goods that come in cans are not so good as similar articles that are prepared in America. So much fruit is preserved in this country for winter use that the introduction of American glass jars would be a blessing. As soon as the people become accustomed to them, there would no doubt be a large demand. Fifty to sixty thousand bottles of beer are imported into Jerusalem every year, and a large part of this trade might be in American hands.

One merchant ventured to import a small invoice of American-made ladies' shoes; they were taken at once, and there is a call for more. English ladies who tried them were highly pleased with them.

In every case when I introduce the subject of American goods to the merchants of this city, it is admitted that in general they are

superior to those of the same kinds from other countries, and the merchants say they would like to keep them for sale; but the expense of getting them to Jerusalem is the great barrier. The consul is not the person to remove this barrier; this should be done by action taken in the United States. Occasional visits to this coast of American steamers, and a central store with branches, as suggested, seems to be one way of securing to the United States its share of the trade of this country.

BRITISH VS. AMERICAN GOODS IN SOUTH AFRICA.

I have the honor to submit herewith an extract or article from the British and South African Gazette, in reference to preference in South Africa for American goods, with the editor's comments on same.

I desire to say that from all information obtainable by this consulate, from personal interviews with merchants and American travelers, the coast towns do not give preference to American goods "in cases where the British article is as cheap, as good, and as salable as the American." Neither do I believe that the merchants of Johannesburg "insist upon being supplied with British goods, even in cases where they might benefit their pockets by patronizing the Yankee;" nor do I agree that "South African buyers are ready to accord a preference to British goods and are willing to prove their partiality by affording British traders every opportunity of acquiring samples of American goods." I believe that price and quality are the important considerations. Goods that give satisfaction, that are adapted to the demand, will sell, be they British or American.

From all I can learn, goods once introduced and proven satisfactory are hard to replace by others equally as good. Take, for instance, lard from the United States; the product of one packer is preferred, and all offers have not, up to the present time, been able to introduce other brands to any extent. The African merchants may know that other brands are just as good, but they say: "My customers call for a pail of —— brand, and I can not afford to take the time to try to convince them that another brand is just as good." I know of one house that bought quite a large quantity of another brand of lard, with which the consumers of the United States are fully satisfied, and that at this writing, a year after purchase, has most of it on hand.

The same may be said of canned corned beef and many other goods. I have arrived at the conclusion that goods once introduced and proven satisfactory can not easily be substituted by others, and

also that much depends upon the salesman; next, on the quality and adaptability of the goods; and then on packing, assorting, advertising, and displaying.

I do not agree that American manufacturers "make their home trade pay for their export," or that other countries have to compete with American goods "sold at a merely nominal profit, and in many cases at an absolute loss;" although I will admit that the American manufacturer, like manufacturers in all parts of the world, will sell goods in large quantities for spot cash at a reduced price.

American goods are growing in favor here, for the reason that the quality is good, and our producers will go on to capture their share of the world's trade. At this writing, four large steamships from New York are discharging cargo at South African ports, and more are on the way.

While American manufacturers and producers are not getting their share of South African trade, I assert they have only to present their claims and show the quality of their products to obtain that share.

J. G. STOWE,
Consul-General.

CAPE TOWN, *September 15, 1898.*

DO AMERICANS GET PREFERENCE IN SOUTH AFRICA?

The increasing importance of South African commerce is evidenced from the special attention which is being directed to it from time to time by various trade organs. One of the most influential of these has recently been devoting considerable space to reports of interviews with South African visitors and Sheffield business men, and the information gleaned, although for the most part not new, certainly has the merit of being interesting. One of the gentlemen interviewed, however, gives expression to a comparison of colonial treatment of American and English travelers, which we unhesitatingly say is as unfair as it is unwarrantable. It is gratifying to observe that a confutation of the statements made has been undertaken by subsequent correspondents, one of whom outlines the real causes for any South African preference which may exist for American over British goods. As the comparison in question and the correspondence thereon offer points of general interest, we have no hesitation in setting out the salient points of the matters at issue.

The statements to which exception is taken emanated from Mr. W. A. Colley, cutlery manufacturer, Sheffield, who has recently returned from a tour through the principal business centers in South Africa, and who "complains bitterly that preference is shown by importers in South Africa for American goods and traders over British." Our contemporary then proceeds to remark:

"Mr. Colley's experiences in this respect are, unfortunately, not singular. Johannesburg is exempted from this charge of unpatriotic conduct, for many of the people there insist on being supplied with British goods, even in cases where they might save their pockets by patronizing the Yankee. The complaint applies particularly to the coast towns—Cape Town, East London, Port Elizabeth, and

Durban. It is said that in these places the importers give the preference to American goods in cases where the British article is as cheap, as good, and as suitable as the American. Moreover, it is said that the American traveler is received with open arms, while his confrère from the Old Country experiences great difficulty in obtaining an interview, although the merchants who are being waited upon are mainly Britishers. Seeing that these gentlemen are our fellow-subjects, Mr. Colley thinks they should give the preference to British goods, at least under equal conditions."

In these dozen lines serious categorical charges are leveled against the practice of Cape Colony and Natal coast houses, the very general and sweeping character of which was bound to invoke a challenge.

This was promptly taken up by, among others, Mr. A. W. Keep, of Messrs. Keep Brothers, the well-known Birmingham merchants, who has also just returned from South Africa, and he has given the assertions an emphatic denial all along the line. He bluntly states that the "really remarkable experiences" of Mr. Colley are, as everybody acquainted with the trade circumstances of the country must be aware, in direct opposition to all his experience in the course of several visits during the past few years, and he believes that it is also that of the great body of "commercial" now traveling in South Africa. That "in the coast towns the importers give the preference to American goods in cases where the British article is as cheap, as good, and as suitable," he characterizes as absolutely at variance with his own experience, which has been that South African buyers are not only ready to accord a preference to British goods, but are also willing to prove their partiality by affording British travelers every opportunity of acquiring samples of American articles and as much information as possible respecting their prices, discounts, and terms. On the general question that the demand for American goods is on the increase, he makes a concession; but adds that to aver that this is due to any preference for American travelers is too much to believe.

American preference, where it exists, has, he fears, a deeper *raison d'être*, and is more associated with "inherent quality, superior packing, or cheapness."

In this connection, the evidence of other persons is very pertinent. Mr. G. S. Withinshaw, who carries on business as the African Tool Company in Cape Town, when questioned as to the sources of his trade supplies, stated that, though drawing the bulk from the Sheffield and Birmingham districts, such American productions as Stanley's planes, Disston's saws, Collin's axes, and Cheney's adze-eye hammers were the favorites in their respective classes.

Mr. Withinshaw claims a superiority for American methods of packing, which, he says, are also greatly preferred by customers to the styles ordinarily adopted in England. Coming to particulars, he alleges that the use of casks for the packing of hardware customary with English manufacturers is space wasting and costly, whilst the packing of light and heavy articles together in one case is detrimental to the frailer articles and a constant source of disappointment and loss.

Mr. George S. Fitt says that packing, in a country where transport is extremely dear (£11 per ton from Beira to Umtali), is a matter of great importance, especially as the railway reserves the right to charge by weight or measurement, whichever proves higher. Thus, nails in kegs are charged by the ton, and general hardware in case by measurement. The importance, indeed, of the transport item may be recognized from the fact that goods delivered at Salisbury usually range between 75 and 250 per cent above London rates. English bicycle manufacturers, Mr. Fitt says, are especial sinners in the matter of packing; but manufacturers of tools are no less culpable, goods being often found delivered damaged from water, even though packed nominally in tin-lined cases.

The important issues raised by the several correspondents may be shortly ré-

suméd as follows: Americans are able to lay down certain goods better or cheaper than we can; American saws, planes, files, hammers, etc., enjoy a preference by colonists over those of English make; English packing is defective and inferior to foreign and prejudices the sale of English goods; English firms are unaccommodating in the matter of redress of grievances; and, finally, the assertion of Mr. Colley that American travelers enjoy a preference over English in South African coast towns.

Mr. Colley, in his reply to Mr. Keep, cites the following:

"In a certain coast town of South Africa, I have called four or five times on a certain firm who buy their cutlery from two well-known Sheffield firms. On each visit I have tried, but unsuccessfully, to persuade the principal to see my samples, and on my last visit he told me he had just sent a cutlery order to the States. I inquired why, did he find the American cheaper or better than the English? He replied that he had not compared them, but that he had seen some patterns which an American traveler had shown him, and that he thought he could sell them. I then asked if there was anything special about the patterns. His reply was: 'No; they were similar to the English.' Now, why should this man go to the States without any reason to buy his cutlery, and, moreover, look at an American traveler's patterns when he would not look at mine or those of other Sheffield firms? I have spoken of this to other friends of mine in the cutlery trade, and they, too, have been unable to submit their samples to this man for his inspection. Of course, I do not mean to say the American competition is much, for it is only very small, indeed; but this is a case in point, and I could multiply cases, if it were necessary, both in this and in many other lines."

Mr. Colley proceeds to vindicate English manufacturers from the charge of lack of inherent quality and cheapness. This is what he says on these points:

"I, for one, maintain that in quality the English file is superior to the American, and that the latter is in the end dearer than the English. Let us take, for example, a 14-inch flat bastard, which, I suppose, is the most usual file sold. The extreme American discount is 70 per cent and 5 per cent free on board New York, making a net cost of 8s. 6½d. per dozen. The English file of good quality would probably be 62½ per cent and 5 per cent free on board London or Liverpool, or 10s. 8d. net cost per dozen. The weight of the English file is about 21½ pounds per dozen, and the American file is considerably lighter. No one disputes, I think, that when worn out the American file is useless; but the English file of good quality is a piece of good steel, which can be used for dozens of purposes, and is so used. To make a fair comparison, you must therefore take into account the value of the old material in each case. That of the American is practically nothing, whereas the steel of the old English file is, at any rate, worth abroad 2½d. per pound. Taking this into account, the English file becomes the cheaper of the two. I have seen turning tools and other articles made out of old English files in many a smith's and engineer's shop, and have been told that they were found very useful. Make the English file as light as the American, and a small further decrease in the cost of the English file takes place; go further, and make the English file from Bessemer steel and of light weight, and it can be sold at the same price as the American, including boxing all sizes. As regards rasps, the advantage of using one of good material is still more evident. I freely admit that when first introduced the American machine-cut rasp was far more suitable, owing to its high tooth, than the Sheffield one, which was hand cut. Now, however, many file manufacturers in Sheffield have laid down similar machines, and a Sheffield rasp is produced equal to the American; moreover, made of good bar steel, whereas the American is, I believe, always of Bessemer. This Sheffield rasp, when worn out, is exceedingly useful for steeling picks and many other purposes in a smith's shop, whereas if the smith

buys American rasps he can not use up the old material and has to buy steel for steeling picks, etc. Such steel would cost, at any rate, 3d. per pound in the coast towns of South Africa. Does not, therefore, the average file user benefit by paying rather more for his files and having an article of some value left in place of an absolutely worthless article when the file is worn out?"

In replying, Mr. Keep contends that the lightness of the American file is not so great a matter as the vastly more important fact that Americans have introduced a file that suits the South African market and gives the consumer satisfaction. He thinks that Mr. Colley's argument that the English file when worn out is worth more than the value of a worn-out file from America, does not apply at all, and declares that the user does not stop to consider the value as old material, but straightway gets himself another. Mr. Keep then goes on to say:

"Within the last few weeks, I have submitted the matter of files to two representative Sheffield makers, and have asked them if they would not undertake to match the American article at American prices. One firm replied that they had 'heard of the American competition, and were hopeful of being able to find means to meet it, but their plans were not yet matured.' The other maker wrote to say that he would accept 'large orders' at the American discount. When pressed, however, to say whether he would be prepared to put his files up in the American style, with boxes and cases free, he declined to entertain the matter any further."

On the question of freights, Mr. Keep states:

"I am prepared to admit that in this respect the American gets slightly the best of us, since rates from New York are somewhat lower than from here. The difference, however, is only some 4s. or 5s. per ton—certainly not sufficient to keep the British manufacturer out of the market, other things being equal."

Mr. Keep continues:

"As things are at present, the Yankee uses our colonies as a 'dumping ground' for his surplus production, and it is this surplus production which we have to compete against. I believe I am quite correct in stating that what the Americans call their 'domestic' quotations are (generally speaking) much higher than the prices they quote for export; in other words, their home trade is made to pay for their export, and the British manufacturer has to compete with goods sold at a merely nominal profit, and in many cases at an absolute loss."

"Mr. Colley's remark that we have much to learn from the Americans, I most heartily indorse. That colonial buyers do not extend any undue preference to Yankee goods I have already asserted; but, on the other hand, it would not altogether surprise me if they did, for in many respects it can not be denied that our American cousins are really far ahead of us. It seems to me to be the aim of every American manufacturer (before he starts to make anything) to find out: firstly, exactly what to make—*i. e.*, what is best suited to the market he wants to deal with; secondly, having settled on the article, he finds out the best way to make it; thirdly, the best way to box it; fourthly, the best way to label it; fifthly, the best way to pack it; sixthly, the best way to catalogue and invoice it. Every little thing is considered, the maker's aim apparently being to surpass anything and everything his competitors have hitherto produced, and to give his customers as much information as possible in the best and handiest form. In making these remarks, I candidly confess I have but faint hope that they will bear any result. For years past buyers in the colonies and merchants at home have been trying to instill into British manufacturers some idea of what their American and German competitors are doing and some sense of the seriousness of the position in which our interests are placed, but almost without result. True, some of our largest manufacturers have gone abroad and seen for themselves, and have retained and increased their trade in consequence; but the bulk of our Birmingham, Sheffield, and Wolverhampton

ton makers have never even seen a case of Yankee hardware or a package of German tools, and I fear they would not learn anything from them if they did. I only wish that a few of such makers could have been with me on some of the many occasions when I have had the excellence of American goods and the shortcomings of British goods pointed out, explained to, and impressed upon me, and could have borne their share of the 'dressings down' and the 'blowings up' which have been inflicted on myself."

AMERICAN BUTTER IN CAPE COLONY.

In my recent report on butter,* I called attention to the large quantities imported into South Africa from Australia and Denmark, and offered advice as to the preparation and packing of American butter. I am informed that within the last two months from 3,000 to 4,000 boxes (of 56 pounds) from America have reached this city through London. This was shipped here as Australian butter, all the American marks on the boxes having been erased and Australian marks substituted. By this means all credit to the products of the American producers is lost, and this action is prima facie evidence that the American butter is now satisfactory, although complaint is still made that it is too yellow. Other shipments of butter, to the amount of several thousand pounds, have been recently received direct from America with the American marks thereon. The absence of the Australian government stamps on the first-mentioned packages attracted notice, and the attention of the Australian representative in London was called to the same, and it is stated that the matter is now being investigated by him. There was also a difference in the packages, the American ones being more solid or substantial. United States producers should have trade-marks or brands of their own, duly registered, and, if possible, government stamps or marks on the packages. The demand for American butter is from July to October, when the Australian and Denmark butters are not on the market, the former occupying the market from October to May and the latter from May to July, these months being the butter-making seasons of the respective countries. American producers should therefore prepare for export in the months stated.

J. G. STOWE,
Consul-General.

CAPE TOWN, *September 17, 1898.*

* See CONSULAR REPORTS No. 226 (September, 1898), p. 102.

WOOD MANUFACTURES IN SOUTH AFRICA.

Under date of October 8, Consul-General Stowe, of Cape Town, writes to an export association in Chicago, as follows:*

There is little timber in this country, and consequently all furniture and other articles made from timber must be imported. American oak, ash, and even the cheaper woods stained or painted and varnished are acceptable. Medium-priced furniture is what is wanted, although much of the elaborate and high priced could be sold.

I have seen only one screen door here, and that was made by an American for his own home. I received a bid recently for four cheap screen doors and seven windows (lower sash only), the wire on the windows to be simply tacked on, and the price was \$27.50. The doors would have been very light and far from strong, on account of the high price of lumber. The people here know nothing of fly screens, though they are as necessary as in America. I am of the opinion that the demand would be large if they were once introduced, but the price must be satisfactory. All the screen wire is imported and is very high, and the mesh is too large. The fine wire used in the United States is not found here. Such goods would very likely come in under the head of furniture, the duty upon which is 9 per cent ad valorem, and the freight would be comparatively light on account of the small space the doors would occupy on the ship.

Very few window and door frames are made here; nearly all are imported. In order to successfully meet the demand and establish a trade, the best and safest plan would be for someone posted in the manufacturing of such materials to come here and see how the houses are built. The door and window frames differ in several respects from those used in America. American manufacturers must disabuse their minds of the opinion that what is good in shape, form, and finish in America is good for the whole world. People in different countries build differently, on account of location, climate, etc., and their tastes must be catered to. One of the lessons to be learned by the American manufacturer is that he must adapt his products to the wants and needs of the foreign buyer. You can not force upon the foreign buyer what you may honestly believe is the article he ought to buy, but after willingly supplying him with what he wants, you can gain his good will and confidence, and finally convince him that you are right and he wrong.

Again, the actual article to be sold must be seen. When you want to sell engines, machinery of all kinds, furniture, window and

* The original letter has been forwarded to the association.

door frames, and other materials produced in other countries as well as your own, you must show the article. While I am pleased to see the producers of the United States supplying the market with cereals, oil, canned meats, etc., which they alone can furnish in quantity, I do not like to see their whole attention centered on these lines. They should rather find a foreign market for goods which can be sold on their merits when in competition with other countries. For, though this country does not now produce food products, its large herds of cattle having been killed off by disease, these conditions will change in time, and the large imports of meat will cease; and with irrigation and intelligent farming, the cereals will be raised to supply the home demand. But many years will elapse before the country can produce its own manufactured goods. With no timber and no iron, and thus far no coal suitable for manufacturing purposes, manufactured articles must be imported.

As to the financial condition of the South African merchant, it is worthy of notice that but few failures occur, and none of any moment. Considering the rinderpest, drought, flies, locusts, and the loss of trade with the Transvaal, conditions are creditable.

PRICES IN SOUTH AFRICA.

Owing to the fall in the price of wheat, the millers have reduced the price of flour 6d. (12.1 cents) per 100 pounds wholesale. Quotations, 17s. 6d. to 18s. 3d. (\$4.257 to \$4.44) per 100 pounds. Australian and California wheat is offered at 18s. 3d. to 21s. 6d. (\$4.44 to \$5.109) per 100 pounds. Each steamer from America brings large quantities, and 20,593 bags have recently arrived from Valparaiso.

Corn is quoted at 14s. 6d. (\$3.527) per 100 pounds in Cape Town and 18s. 3d. (\$4.44) in Johannesburg. The demand continues, and supplies do not satisfy it; the same is true of American corn meal. This is quoted at 17s. (\$4.136) per 196 pounds, and colonial meal at 19s. (\$4.62) per 200 pounds. Large importations recently arrived from America per steamships *Stratford*, *Britannia*, and *Strathness*, and 11,753 bags were brought by steamship *Algona* from Montevideo.

There is also an enormous demand for samp, a new article of imported foodstuff which is winning the market, even to the detriment of corn, large quantities arriving.

The prospect of Delagoa Bay becoming an English port is regarded with pleasure, and the changes likely to occur through the changed ownership will be the means, it is claimed, of great gain to

the gold industry of the Transvaal, causing reduction in the cost of production.

I note that the demand in corrugated iron still continues, and it is supplied principally from England. Quotations, £13 (\$63.26) per ton. Inquiries for steel rails are noted for the mines, and are quoted at £11 15s. to £12 (\$57.18 to \$58.40) per ton.

On account of the advance of paraffin oil in America, an increase is noted here. Quotations, 8s. (\$1.95) per case of two 5-gallon cans, and 13s. (\$3.16) per case of ten 1-gallon cans. Ten thousand cases were recently landed.

During August, an increase both in imports and exports was shown, and the same may also be said of September. The trade with Rhodesia, in the north, is increasing.

J. G. STOWE,
Consul-General.

CAPE TOWN, *October 2, 1898.*

AMERICAN GOODS IN LOURENÇO MARQUEZ.

The following extracts are from the annual report of Consul Hollis, of Lourenço Marquez, which will appear in full in *Commercial Relations, 1897-98*:

BEER.

There is a very good market for beer of all kinds here. Large quantities of English ale and stout are consumed; but these beers are too heavy and are unsuited to the climate, and the old resident after awhile drops them for something lighter, such as German Pilsener beer.

Lately, several parties have endeavored to introduce American lager beer here, and, considering the present commercial depression, I think they are making some headway. The brands that have been sold here are generally well liked, and, when trade improves, a very good business in this line can be worked up by American brewers of really first-class beers.

I have noted that some American brewers are too conservative in their business methods for this country. They want remittances to cover all orders, and are not at all inclined to ship sample lots. A little more liberality in the matter of samples and terms of payments would, no doubt, result in increased sales. It is quite safe to sell and to draw upon the bills of lading to any firms or individuals who attach to their orders a letter from their local bankers, recommending them as desirable people with whom to trade.

In regard to the packing and prices of American beers, I think I can safely say that both are entirely satisfactory.

BICYCLES.

There is little or no demand for bicycles in Portuguese East Africa. There are but a few miles of hard roads in Lourenço Marquez, and parts of these are very steep. The remaining roads are sandy, and it is an absolute impossibility to ride a bicycle over them. The only people selling bicycles here are Mr. C. Levy, of "Levy's Kiosk," and Mr. P. Antoine Callot. Mr. Callot also deals in watches, clocks, jewelry, and mathematical instruments.

In the Transvaal, there is always a demand for bicycles, and several of the leading American bicycle manufacturers are represented there by resident agents.

When the country recovers from the present depression, which, I am convinced, will not last many months longer, the demand for bicycles will improve greatly. American bicycles are already liked, but any new firm wishing to do business in the Transvaal will have to energetically fight the competition of the American and foreign agencies already established there.

BUTTER.

All the butter consumed in this country is imported. The Danish and Dutch brands, in 1-pound tins, are generally preferred to the Italian and French brands in kilogram and half-kilogram tins. The duty on butter here is 100 reis (10.8 cents) per kilogram (2½ pounds); but if the duty is paid in Portuguese silver, instead of in English gold, it only amounts to about 7½ cents per kilogram.

The latest quotations for 1-pound tins of the best Danish butter are from 2s. to 2s. 6d. (48 to 60 cents) per tin.

In my opinion, there is an opening here for the introduction of first-class American butter, packed in 1 and 2 pound tins that can be opened by a key attached to each tin, and without the use of a can opener or other similar instrument. All butter tins that I have seen upon this coast are opened by keys, upon which narrow strips of tin—soldered so as to join the body of the tin to the cover—are wound, and in this manner removed.

CORN.

The province of Mozambique is a corn-producing country and generally raises fully enough for its own consumption. Occasionally, however, the crop fails, owing to locusts or to drought, or to both, and it becomes necessary to import corn. On these occasions, the importers generally cable to their agents in the British colonies or in London and inquire where corn can be procured cheapest, and, as corn is used only for feeding Kaffirs and cattle, they buy in the lowest market, irrespective of quality. Last year, several shiploads

of corn were imported here from the United States and from South America. Some of the American white corn that had been shipped in slow, iron sailing vessels had heated and sweated during the long voyage and had also become infested with vermin. This corn, as a matter of course, was not accepted by the consignees, and the shippers thereof were subjected to a heavy loss.

It is generally believed that for a long voyage with a cargo of corn, a wooden vessel is far preferable to an iron one, as it is not so liable to cause the cargo to heat and sweat.

The Banian and Arab merchants, who are the principal retail dealers in corn, all tell me that the corn crop this year in this province has been a very good one indeed. It is quite an impossibility to estimate the amount of corn consumed here, and there are no statistics showing production or consumption in this line.

The demand for corn in the Transvaal is increasing, and the price is rising. The price of white corn at present in bond in the custom-house is 12s. (\$2.92) per bag of 90 kilograms (198 pounds). The leading corn merchants are Messrs. Donaldson & Sievwright, Messrs. Arthur May & Co., the Lingham Timber and Trading Company, Messrs. Hajer Dada, Abdulla & Co., and Hajer Latif Khan.

PETROLEUM.

The petroleum trade, or, to be more correct, the trade in kerosene oil, is entirely in the hands of about half a dozen New York commission houses. The competition between these houses and between the rival steamship lines running from New York to South Africa is so keen that large profits are out of the question. During May and June, the price of kerosene rose to an abnormal point. Prices in normal times are but a little more than the prices f. o. b. New York, plus the freight—which averages from \$6 to \$6.25 per ton—insurance and sundries, and the local customs tax of 5 per cent ad valorem, payable in gold.

I am told the Standard Oil Company is contemplating establishing an agency and oil storehouse here, negotiations to that end having just commenced.

STAMPED-METAL CEILINGS.

A very good trade in stamped-metal ceilings may be done here. These have lately been introduced by a few enterprising builders, and it is becoming the custom now to put them into all good houses. One of the leading merchants, who is building a house not far from this consulate, told me recently that a short while ago he wanted some metal ceiling in a hurry, and that, not having time to get it from the United States, he wired to England for it. It turned out

that, although he cabled plainly for stamped-metal ceilings, his English correspondents did not know what was wanted or where such goods could be obtained. After considerable time and money had been wasted in cabling and correspondence, he finally made his English friends understand what was desired. I hope to see our trade in this line largely increased.

WHISKY.

There is a large and constantly increasing demand for whisky upon this coast and in the Transvaal. Practically everybody here consumes more or less whisky, either with quinine or without; and, in fact, whisky is considered as much of a necessity as butter, condensed milk, tea, or coffee.

Scotch whiskies are generally preferred to all others. In the first place, the great majority of the South African population has already acquired the taste for Scotch whisky; in the second place, the Scotch whisky is good and cheap. A very good brand of Scotch whisky can be bought here, duty paid, at from \$9 to \$10 per case of 1 dozen reputed quart bottles. Good Scotch whisky—in bond—is quoted at from \$4 to \$5 per case.

The present prices quoted by the dealers in American rye and Canadian club whiskies are from \$15 to \$16 per case.

Not until the prices of American whiskies are materially reduced, and the inhabitants of southern and southeastern Africa have been weaned from their taste for Scotch whisky, will there be any very great demand for American whiskies.

STEAM COMMUNICATION.

There are now three steamship lines running from New York to this port. The New York agents are: Barber & Co., 35 Broadway; Henry W. Peabody & Co., 58 New street; Norton & Son, 115 Produce Exchange.

DEVELOPMENT OF THE KONGO FREE STATE.

The celebration by the city of Antwerp, on October 16, of the progress of the Kongo Free State has attracted wide attention. In his speech on that occasion, the King, after calling attention to the enormous difficulties in the way of commercial development in Africa, spoke of the remarkable advance in trade made by the Kongo during the last few years, although the railway connection with the interior navigable waters of that territory was completed only last July. The importations, from 7,500,000 francs (\$1,447,500) in 1893,

increased to 22,000,000 francs (\$4,246,000) in 1897, of which more than 16,000,000 francs' (\$3,088,000) worth came from Belgium. The exportations increased from 5,500,000 francs (\$1,061,500) in 1893 to more than 15,000,000 francs (\$2,895,000) in 1897, of which 13,000,000 francs (\$2,509,000) was sent to Belgium. The King spoke of the probability that the railway now finished and others to be constructed would increase this commerce at an even greater ratio. The Government policy in regard to the Kongo, he said, would be to keep it an absolutely neutral power, as Belgium has been; to imitate Germany in the formation of numerous export associations; to encourage by all means, private and official, the establishment of centers of trade in Africa. Calling the Scheldt the "rival of the Clyde," the King proceeded to urge an increase in the number of plants and factories on its banks. "Antwerp," he said, "can be the greatest commercial city of the Continent. We Belgians were the first on the Continent to build lines of railway. Let us prolong them by lines of steamers. Let us busy ourselves with this important business of ocean transportation. Regular lines of shipping—that is what we must have, and that is what will give us all the advantages of a navy without its cost."

BELLAMY STORER,

BRUSSELS, *October 22, 1898.*

Minister.

SUGAR IN NATAL.*

Consul-General Stowe, of Cape Town, under date of September 14, 1898, incloses a pamphlet giving a description of the sugar industry in Natal, up to 1891, from which the following extracts are taken:

The total export of sugar by sea from 1854 to 1891, inclusive, was 187,942 tons, of a value of £3,456,564 (\$16,816,968). The quantity consumed within the colony and exported overland may be estimated at 62,647 tons, of the value of £1,152,188 (\$5,607,122). The exports by sea have been mostly to Cape ports. Of late, a few shipments have gone to Australia and India. Exports to London have been chiefly of low qualities for refining purposes. The varieties of cane most in vogue are "Green Natal," "Lousier," and "Port Mackay." The yield per acre averages 1½ tons, though 2 or 3 is not uncommon on good land. There are thirty-six factories in working order, most with an output of from 200 to 500 tons per annum. The crushing season runs from June to January, the planting from August to December. Indian coolies are employed as laborers. The climate has proved favorable to the cultivation, on the whole, although there are occasional severe droughts. It is only a coast belt, ranging from 6 to 12 miles in width, that is adapted for sugar growing in Natal. A great advantage which the Natal planter possesses, though he has hardly learned to appreciate it, is the possibility of a cheap fuel supply in colonial coal.

* For previous report, see CONSULAR REPORTS No. 214 (July, 1898), p. 467.

The consul-general adds:

Since the above was written, the production has increased, and at this writing there are in operation many mills, producing in 1897 20,000 tons of sugar and 160,000 gallons of rum, with 30,000 acres under cane cultivation. As the cane takes two years to mature, about half that acreage is reaped annually. The crop may be said to have an average output of 20,000 tons, and will be over that figure for 1898. In 1895 and 1896, the average was reduced by at least 25 per cent, on account of the ravages of locusts. This pest has now practically disappeared, and it may be said to have been an abnormal calamity, there having been no previous visitation of locusts for over forty years. It is impossible to say with accuracy what the average cost of production of sugar is, as it varies on different estates according to methods of culture and manufacture. The products are good and marketable, consisting of white and yellow sugar, similar to that of Mauritius.

A refinery has recently been established for the manufacture of refined from low-class raw sugar and sirup; and at the recent annual fair held at Durban, granulated white sugar received high awards, and was of a superior quality. It is expected that, if the customs union convention between the colony and other states of South Africa becomes operative,* a large and important development of the sugar industry may be anticipated. No official statistics in this line have been collected, but the government has lately taken steps to obtain reliable figures as to trade and agriculture generally. The machinery for the extraction of the sugar from the cane and the conversion of the juice into sugar is of modern manufacture, principally English. I am of the decided opinion that manufacturers of sugar machinery in the United States should exhibit at the South African Exhibition at Grahamstown, which opens December 15 of this year.†

The tariff on sugar is—

Customs districts.	Refined.	Unrefined.
Natal	2 cents per pound..	85 cents per cwt.
Cape Colony.....	\$1.25 per cwt.....	Do.
South African Republic.....	85 cents per cwt.	

Natal exported in 1897, 770 gallons of rum, 328,992 gallons of molasses, and 7,679 cwts. of unrefined and 43 cwts. of refined sugar.

* See CONSULAR REPORTS No. 219 (December, 1898), p. 625.

† See CONSULAR REPORTS No. 214 (July, 1898), p. 468.

The imports were:

From—	Refined sugar.	Unrefined sugar.	Rum (raw).
	<i>Pounds.</i>	<i>Cwts.</i>	<i>Gallons.</i>
United Kingdom.....	186,805		2,736
Bombay.....	2,166		
Calcutta.....	384		
Macras.....	224		
Hongkong.....	336		
Mauritius.....	12,590	40,041	
Belgium.....	72,163		
Germany.....	52,446	1,574	
Holland.....	189,699		
United States.....	2,190		
Other countries.....		89	374
Total.....	519,003	41,704	3,110

The quotations to-day on sugar are, per 100 pounds:

Description.	Cape Town.	Port Eliza- beth.	East Lon- don.	Natal.
White crystal.....	\$5.00	\$4.75	\$4.75	\$4.14
Light yellow.....	4.56	4.56	4.56	3.53
Brown.....	4.00	4.14	4.14	2.55
Yellow crystal.....	4.87	4.56	4.56	3.93
Dutch crushed.....	5.35	5.35	5.35	8.76
German granulated.....	4.86	4.74	4.74	4.96

I wish I could give more detailed information in reference to cost of production of sugar, but it is not obtainable.

Coolies from India are still depended on for the cultivation of the cane, although of late years they have been gradually entering into trade, and, it is stated, are in a measure driving out the small white shopkeepers. A recent decision of the high court at Pretoria confirms the right of the government to order coolie or Indian traders into a special location. It would seem, with the many thousands of blacks living in the colony of Natal, that labor would be cheap, but they will not work, except occasionally, and can not be depended upon.

TRADE CONDITIONS IN JAPAN: OPENING FOR AMERICAN GOODS.

The following extracts are from the annual report of Consul Lyon, of Hiogo, the full text of which will appear in Commercial Relations, 1897-98:

Nothing serves better to illustrate the progressive spirit of the Japanese than their great anxiety for the introduction of foreign

capital for business purposes. The efforts in this direction by the business classes are strongly supplemented by the vernacular press and by the Japanese chambers of commerce in Kobé and elsewhere.

The foreign and Japanese chambers of commerce lately held an informal joint meeting in relation to this subject, at which time it was plainly pointed out by the foreign chamber that the capital sought, being necessarily timid, required to be properly safeguarded by a more liberal display upon the part of the Government, such as, for instance, the equalization of foreigners with Japanese in regard to the holding of shares in stock companies and in reference to the ownership of land.

Japanese business people are slow, methodical, and cautious in their dealings, and it is characteristic of them to protect themselves at every point. Business must be done carefully with them, as well as with others; their responsibility must be thoroughly investigated, and also their general business reputation. There are mercantile agencies in this country which furnish financial ratings, and some of the representative Japanese houses have branches in one or more of the leading American cities.

It may be noted that there has of late been considerable complaint that goods have not been promptly taken upon arrival, and this is said to be part of a scheme by some to finally obtain them at a lower rate. The only way to do business successfully, with this class, would be to require the deposit of a sum sufficient to reimburse the shipper in such cases. It has largely become the practice for even reputable Japanese merchants to not only put up margins upon orders, but to fully secure the payment of large invoices upon delivery of bill of lading.

There is a peculiarity about the Japanese that does not attach to any other people, and it is this: The average Japanese are very suspicious of small wares that are not backed up with fancy trade-marks. They buy goods much more readily that carry a device or an emblem, or that bear a seal, and many a good article would be in danger of rejection because not put up fancifully.

They also attach importance to small, neat packages, not too many of a kind together; this is more in keeping with Japanese tastes. In America, small articles are put up and sold by the dozen; the Japanese want them separate, and this is not only true because things here are generally on a smaller scale, but there are financial reasons why it is so. Their means are limited, and they use everything sparingly.

It is probably true that the German exporter understands the native taste better than any other. The markets here are full of small wares from Germany, put up in attractive style and in small

quantities to find ready sale. Another point in favor of German exporters, is the fact that they do not confine themselves to the quick and ready methods of others, but stay upon the ground until they get the trade. It would be well for Americans to note a little more closely the fact that the markets of the East can not be obtained entirely by wide-awake methods, but that much patient and persistent effort is required.

SUPERIORITY OF AMERICAN GOODS.

The Japanese have no prejudice against American goods or manufactures; on the contrary, their superiority is freely admitted in many lines. As an illustration, there was recently made at Tokyo, by the authorities of the locomotive department, a critical test of English and American locomotives, and it resulted in favor of those made in America. The American locomotives were pronounced superior in all respects, and it was especially noted that they worked more economically. Tests have also been made of American machinery and many other manufactures from our country, and in regard to their quality the results have proved most satisfactory. The chief difficulty in the way of the greater introduction here of American goods lies in the fact that our merchants and manufacturers are not putting forth the same degree of effort for the Japanese markets as exporters from other foreign countries.

SENDING CIRCULARS AND PRICE LISTS.

Too much of this is done to the exclusion of personal effort. The hotel reading rooms and private offices are stocked with mail matter from all parts. In the United States, circulars and price lists alone may produce some result; but they will avail but little 9,000 or 10,000 miles away from home, unless followed up by salesmen. One firm might deluge the market with trade literature for years, and another could send an energetic man along and pick up all the business. It might be well to pave the way by advertising; but, in order to insure sales, the man must be upon the ground. He must be intelligent and persistent, and his firm should bear in mind that this market is not worked any more easily than are the over-worked markets at home.

CARE IN PACKING GOODS.

For the better protection of shippers' interests, it may be said that much more care should be taken by them in packing their goods for this market. Several well-founded complaints have recently been made in this respect concerning American goods, and while it is true

that the same fault attaches to other foreign shippers, that fact is not of much value to American exporters. As one instance of many that have lately been brought to the attention of this consulate, it may be mentioned that one of our leading American houses here recently received from New York an invoice of seven metal fireplaces, for immediate delivery. They were fine specimens and just what would have suited, but when received they were all found to be in a badly broken condition, caused simply by being improperly packed.

Such cases as these not only entail considerable loss upon shippers, but they destroy the prospect of future orders. In connection with this subject, attention should be called to several recent shipments of American cotton, claimed by the consignees to be not up to standard. Four cases of this kind have occurred at this port within the last four months. Upon application at the consulate, surveyors were appointed to inspect the cotton and to extract samples from each bale, in order that they might be forwarded under the consular seal to cotton experts in America, for examination as to value.

This not only entails loss to the shipper, but, in the estimation of some here, it tends to lower the high standard of American cotton, which export is by far the most valuable one from the United States to this port.

TRADE WITH THE UNITED STATES.

In the year ending December 31 last, the United States exceeded all other countries in exports to and imports from Japan of the commodities named in the following tables. The declared values of the same are stated, together with those of the chief competitors for this foreign trade.

Exports from foreign countries to Japan.

Articles.	United States.	Great Britain.	France.	Switzerland.	Germany.
Butter.....	\$13,318	.....	\$12,072	.....	.....
Carriages and parts of.....	69,130	\$24,294	.....	.....	.....
Cigarettes.....	285,531	181,530	.....	.....	.....
Condensed milk.....	57,917	19,653	.....	\$19,475	.....
Cotton duck.....	57,974	823	.....	.....	.....
Dynamo electric machinery.....	341,154	92,161	.....	.....	.....
Flour	573,854	.....	.....	.....	.....
Nails, iron.....	467,810	.....	.....	.....	\$210,160
Kerosene oil.....	2,993,989	.....	.....	.....	.....
Leather, sole.....	161,406	.....	.....	.....	.....
Locomotives.....	1,191,905	899,129	.....	.....	.....
Mercury (quick silver).....	45,973	18,308	.....	.....	.....
Machinery, paper making.....	197,000	175,032	.....	.....	.....
Paraffin wax.....	110,552	.....	.....	.....	.....
Timber.....	182,791	.....	.....	.....	.....
Tobacco.....	43,914	2,060	.....	.....	.....
Wheat	105,359	.....	.....	.....	.....

Exports from foreign countries to Japan—Continued.

Articles.	British America.	British India.	Russian Asia.	Korea.	China.
Flour	\$976				\$946
Kerosene oil.....			\$665,503		
Leather, sole.....		\$64,669			
Paraffin wax.....		29,680			
Timber.....	20,085				
Wheat				\$85,969	

Imports into foreign countries from Japan.

Articles.	United States.	Great Britain.	France.	British America.	Hong- kong.	British India.	Korea.
Camphor oil.....	\$44,639				\$42,879		
Fans.....	180,041				99,908	\$2,294	
Matting.....	1,343,230			\$149,753			
Ore, manganese.....	33,057				26,640		
Paper (Gampishi).....	48,661	\$31,466					
Paper ware.....	69,802	31,647					
Porcelain and earthen ware.....	308,947				186,153		
Rugs, hemp, jute, and cotton	192,935	156,703					
Rags	* 63,565						
Silk piece goods.....	63,343						\$42,585
Silk, raw.....	16,066,924		\$10,006,832				
Silk handkerchiefs.....	699,933	342,563					
Silk, Habutai.....	1,762,242		1,326,212				
Straw ware.....	1,426				934		
Sulphur.....	92,252				19,528		
Teas.....	3,263,358			609,137			

*All other countries, \$30.

RAILWAY LOCOMOTIVES.

England started the railway system of Japan, and was thus given a natural precedence in the railway development of the country; but, as may be seen by the foregoing table, she has not maintained her lead. The United States has proved its ability during the last three years to compete with and outdistance its great rival. In 1895, England exported locomotives to Japan valued at \$380,935, against \$142,165 worth from the United States. This year, exportations of locomotives to this country stand thus: Great Britain, \$899,130; United States, \$1,191,906.

This is a field of industry which has been properly worked and in which the superior merits of American locomotives have been recognized, or no such results could have been obtained.

RAILROAD IRON.

The contest for supplying Japan lies between England and the United States, and it is likely that it will continue. In 1895, Great Britain furnished nearly all the railroad iron imported into this

country, a very small quantity having been exported from Belgium and Germany; the United States supplied none. In 1896, the United States exported only a little more than one-sixth as much of railroad iron to this country as England did; but in 1897, a very notable increase took place from the United States in such shipments, and exportations from the two countries stood thus: Great Britain, \$810,110; United States, \$615,018.

At this rate, another year will show the United States to have left its competitor in this export far behind.

IRON—BAR AND ROD, PLATE, SHEET, AND PIG.

During 1895-96, the United States exported none of the above-named manufactures to Japan. The following table, however, shows our country to have been one of the principal exporters in this line in 1897:

Country.	Iron, bar and rod.	Iron, plate and sheet.	Pig iron.
Great Britain.....	\$759,508	\$493,655	\$397,155
United States.....	66,893	622	29,312
Germany.....	145,278	22,884	38,383
Belgium.....	532,142	68,066	.....

IRON NAILS, BOLTS, AND SCREWS.

In 1895, the United States exported to Japan but \$33 worth of iron bolts and screws and \$2,521 worth of iron nails, against which we exported last year iron bolts and screws valued at \$5,262 and iron nails valued at \$469,689. Germany was the largest shipper of nails to Japan in 1896, sending an amount equal to \$469,485, against \$116,160 worth from the United States; but last year, as shown by a preceding table, these two countries changed places, the United States having shipped a large amount, while Germany dropped to less than one-half her former export.

COTTON-SPINNING MACHINERY.

The United States does not materially help to supply the vast quantity of spinning machinery required in Japan. This field is one in which England seems to have always had a monopoly. Her exports here of such machinery during the last year amounted to \$2,632,509, against \$4,557 worth from the United States and but little from any other country.

This state of affairs should be looked into carefully by enterprising American manufacturers of machinery, as cotton spinning in

Japan is rapidly on the increase, involving a brisk demand for equipment.

Japanese agencies for the purchase of spinning machinery are established in New York. Osaka is the chief cotton spinning and weaving district, and manufactures immense quantities of cotton cloth, not only for home use, but for export to China, Korea, and Hongkong.

PAPER-MAKING MACHINERY.

The United States slightly leads in this export. Nearly all of it comes from there and England. In 1896, our country shipped paper-making machinery into Japan valued at \$65,466, against shipments of the same from England of \$24,796. During the year under review, exports stood: United States, \$197,000; England, \$175,032. These latter figures show a largely increased demand for this machinery, and it should be noted that the exports from the two countries named are now nearly balanced. Large paper mills are established in this consular district.

DYNAMO ELECTRIC MACHINERY.

The United States is well ahead in this export and should strive to maintain its lead, as there is no doubt that with the opening up of Japan consequent upon the operation of the new treaties in 1899, the demand for this machinery will be greatly stimulated, as will also be the case with many other foreign inventions and productions.

The following table gives the principal countries exporting this machinery, and the value exported from each, during the last three years:

Country.	1895.	1896.	1897.
United States.....	\$34,923	\$148,143	\$341,154
Great Britain.....	86,854	131,306	92,161
Germany.....	20,585	80,643	83,095

MINING MACHINERY.

This is used for the mining of coal, silver, copper, sulphur, and antimony. The imports were:

Country.	1896.	1897.
Great Britain.....	\$34,200	\$119,231
United States.....	12,533	31,250
Germany	2,754	7,860

FLOUR.

Flour is a growing import into this country, and the United States supplies most of it, a very small quantity being shipped from British America and China. The United States more than doubled its export of flour to Japan in 1896; but during the last year, the exports of this article gained only about 17 per cent, in consequence of its enhanced value at home, cheapness being an indispensable condition to ready sale in this country. When the price of flour in the United States again becomes normal, it will no doubt soon be much more extensively exported to this country.

RAW COTTON.

Since 1895, British India has gained largely in the exportation of raw cotton to Japan, having more than trebled its shipments in three years, while China has fallen behind about 50 per cent.

The United States gained more than 80 per cent in 1896 over the preceding year, and more than 70 per cent in the year under review. In commenting on the increased import here of American cotton, the annual report of the foreign chamber of commerce at Kobe states that from October to December last 120,000 bales were contracted for, and that, in consequence, spinners would, in the near future, be using 40 per cent of American cotton against 12 to 15 per cent in former years. It was also stated in the report that the working of American cotton both reduced the running expenses of the mills and increased their capacity to turn out the finished product.

JAPANESE IMPORTS OF CLOCKS AND WATCHES.*

The following were the importations from the United States and Switzerland during the year 1897:

Description.	United States.	Switzerland.
Clocks and parts of clocks.....	\$75,325	\$450
Watches	109,610	816,000
Watch fittings	25,798	10,700

For the first six months of the present year, watches were imported from the United States to the value of \$82,845 gold, and from Switzerland to the value of \$564,065 gold.

I am advised by the leading importers that the American watch

* This report was made in answer to inquiries by an Illinois firm, to whom Advance Sheets have been sent.

is a superior article, but that what is required for the Japanese market is a watch that is low in price and attractive in appearance, durability not seeming to be so much of an object.

American manufacturers of watches desiring to find a market in Japan for their product have most to fear from the competition of Swiss watches, and can only meet this competition by making a cheap and attractive watch. Such a watch placed on the market here would displace the Swiss article, in my opinion, and speedily lead to a change of importations in favor of the United States.

In this connection, it might be well to state that the new Japanese customs tariff will go into effect on January 1, 1899, and that the duty on watches, watch cases, and accessories is: (a) Gold or platinum, 30 per cent; (b) silver or other, 25 per cent; and on watch movements and fittings, 15 per cent. This is *ad valorem*.

JOHN F. GOWEY,
Consul-General.

YOKOHAMA, *September 27, 1898.*

YOKOHAMA HARBOR REGULATIONS.

Consul-General GoweY sends from Yokohama, September 22, 1898, copy of the subsidiary regulations for Yokohama harbor,* which take effect October 10, 1898, as follows:

BY-LAWS OF THE YOKOHAMA HARBOR OFFICE.

ARTICLE I. The harbor of Yokohama will be divided into four sections, in each one of which will respectively anchor warships, steamers, sailing vessels, and miscellaneous craft.

ART. II. Draw a straight line from the end of the pier in a northeast half north direction the area; to the northwest of this shall be known as the first section.

That portion of the harbor within the breakwaters that lies in a southeast half east direction from the aforementioned straight line shall be considered the second section.

If a line drawn is east from the white light-house to the boundary line of the harbor, that portion of the harbor that lies south of it shall be considered the third section.

If a line drawn is east from the red light-house to the boundary line of the harbor, that portion of the harbor that lies north of it shall be considered the fourth section.

ART. III. The first and second sections specified in the preceding article shall be the anchorage for steamers, small sailing vessels, and miscellaneous craft.

The third section shall be the anchorage for war ships.

The fourth section shall be the anchorage for vessels carrying explosives or inflammable substances, and for sailing vessels of more than 300 tons burden.

ART. IV. Though the anchorage of war ships is limited to the third section, yet the harbor master may, if he thinks fit, allow them to anchor within the break-

* For Japanese harbor regulations, see CONSULAR REPORTS No. 217 (October, 1898), p. 255.

waters. Torpedo destroyers and torpedo boats may always anchor within the breakwaters, but only at such places as the harbor master may direct.

ART. V. Vessels within the boundary line of the harbor may remove to a more suitable anchorage without the permission of the harbor master, but only in case the weather is such as to necessitate their doing so for the actual safety of the vessel.

ART. VI. The water way for vessels coming into the harbor lies between two parallel lines running from the light-houses from the ends of both breakwaters in an easterly direction, and the extent of this water way shall extend to half a knot from the said light-houses and outside of the breakwaters, and to two and a half cables inside of them.

ART. VII. In rough weather, the harbor master will signal from the light-ship the anchorages or buoys for the incoming vessels.

ART. VIII. Vessels arriving at the anchorages indicated by the harbor master shall always drop two anchors.

ART. IX. Vessels entering Yokohama after sunset shall lie at anchor outside the breakwaters and the water way until sunrise, but regular mail steamers who have their buoys or anchorages fixed may enter the harbor at once if the weather or other circumstances necessitate their doing so.

ART. X. No vessels with the exception of war ships are allowed to use swinging booms, but there is no objection to their doing so if at anchor outside of the breakwaters.

ART. XI. Steamers coming in or going out of the harbor or moving from one portion of it to another must under no conditions do so at more than half speed. Sailing vessels must only use sufficient canvas to give them the requisite way, or a towboat should be used.

ART. XII. No vessel shall be allowed to cross the bow of another vessel or to out-sail or outsteam it within the water way of the harbor or within the breakwaters.

ART. XIII. No vessel shall obstruct the passage or anchorage of another vessel.

ART. XIV. Vessels using towboats within the breakwaters, shall, in case no special permission is asked of the harbor office, conform to the following rules:

(1) While towing vessels or cargo boats the distance from the stern of the towboat to the bow of the vessel or boat towed shall not exceed 350 feet.

(2) Under no circumstances shall more than two vessels or cargo boats be allowed to be towed by the same towboat.

(3) Ocean-going vessels shall under no circumstances be allowed to be towed more than one at a time.

ART. XV. No vessels are allowed to come within 600 feet of the customs wharf, except those using the pier.

ART. XVI. No vessel shall be allowed to change its position from a buoy or the pier by paying out an unnecessary length of mooring rope.

ART. XVII. Weather signals will be hoisted on a staff erected within the premises of the harbor master's office.

ART. XVIII. Vessels moored to buoys shall, if required to drop their anchors on account of bad weather, do so only after having paid out a sufficient length of chain.

ART. XIX. All matters relating to the anchorage or passage of vessels within the harbor not specified in the by-laws will be amenable to the "law for the prevention of collisions at sea."

DOCK DUES IN CAPE COLONY.

Under date of September 17, Consul-General Stowe sends the following from Cape Town:

DOCK DUES ON GOODS.

Tonnage rate.

	s.	d.
Upon all goods landed from or shipped to ports or places beyond the limits of this colony.....per ton...	2	6= $\$0.602$
Upon all goods transshipped.....do.....	1	3= .304
Upon coals landed.....do.....	2	0= .486
Upon ashes.....do.....	1	3= .304
Upon all goods landed from or shipped to ports or places within the limits of this colony.....per ton...	1	3= .304
Upon all goods landed, bona fide in transit, or from distressed vessels to be reshipped.....per ton...	2	6= .602
Upon all goods shipped, landed bona fide in transit, or from distressed vessels.....per ton...	1	3= .304
On horses, mules, asses, horned cattle, and ostriches landed, shipped, or transshipped.....each...	5	0= 1.216
On calves, sheep, pigs, and goats landed, shipped, or transshipped, each	0	3= .06

Upon goods less than a ton, a proportion of the above respective rates shall be payable as follows:

Upon one-fourth of a ton and under, one-fourth of the above rates.

Over one-fourth and not exceeding one-half, one-half of the above rates.

Over one-half and not exceeding three-fourths, three-fourths of the above rates.

Over three-fourths of a ton and under a ton shall be charged as a ton.

Fractions of a penny reckoned as a penny.

NOTE.—Charges for fractions of a ton—

Fraction.	2s. 6d. (60.2 cents) rate.		1s. 3d. (26.3 cents) rate.	
	s. d.	Cents.	s. d.	Cents.
One-fourth of a ton.....	0	8	0	4
One-half of a ton.....	1	3	0	8
Three-fourths of a ton.....	1	11	1	0

Dock agents' charges for landing and delivery of cargo.

	s.	d.	Cents.
General merchandise.....per ton...	3	0=	72.9
Bar iron.....do.....	3	6=	85.1

GOVERNMENT NOTICE—1896.

His excellency the governor, with the advice of the executive council, has been pleased to approve of the following alterations in the scale of tonnage for dock dues leviable by the Table Bay harbor board, viz: Barley, from 1,800 pounds to 2,000 pounds per ton; kafir corn, from 1,500 pounds to 2,000 pounds per ton; onions and potatoes, from 1,200 pounds to 2,000 pounds per ton.

H. M. H. ORPEN,
Assistant Treasurer.

AD VALOREM RATE.

7s. 6d. (\$1.825) *per cent.*

Chargeable on the following goods and on goods in any mixed package as described in clause 1 below, landed from or shipped to ports and places beyond the limits of the colony, except when in original packages and consigned to places beyond the limits of the colony, when they will be charged dues under the tonnage scale:

Beads.	Hats of all kinds.
Boots and shoes.	Harness and leather manufactures.
Cutlery.	Jewelry.
Clocks and watches.	Linen and linen manufactures.
Cotton manufactures.	Ostrich feathers.
Clothing and wearing apparel of all kinds.	Plate and plated ware.
Haberdashery and millinery.	Silk manufactures.
	Woolen manufactures.

I. When goods subject to tonnage and ad valorem rates are contained in the same package, the tonnage and value of all such goods must be given on entry, and dues will be charged on the whole at the rate which yields most.

II. The value of rated articles will be the same as that accepted by the customs.

III. All the above articles, when charged under the tonnage scale, are charged by measurement, except beads by weight.

EXEMPTIONS.

1. All naval and military stores for the use of Her Majesty's naval and military forces, or for the use of Her Majesty's civil departments.
2. All stores for the use of Her Majesty in her local executive government.
3. Such reasonable personal baggage of passengers and of masters and seamen as customs duties shall not be levied on.
4. All such military and naval baggage as customs duties shall not be levied on.
5. All provisions and stores not liable to customs duties shipped at this port for daily consumption on board the ship while in harbor.
6. All animals, living, not specified in the above tariff.
7. Coals shipped on which the dock dues were paid when landed.
8. Submarine telegraph cable and the appurtenances thereof upon which dock dues were paid when first landed.

DOCK DUES ON VESSELS.

	s.	d.	Cents.
Vessels entering the docks or basins with the privilege of remaining therein for 21 days, including the day of arrival and departure, per ton.....	0	6	=12
For every day or portion of a day after the above period in docks or basins.....per ton...	0	0½	= 1
Vessels reentering the docks or basins within 40 days from their first entrance on that voyage, per week or portion of a week.....per ton...	0	3	= 6
Should the vessel remain in the docks or basins longer than a week, the charge will be, as on her first entry, viz.....per ton...	0	6	=12
All vessels, whether ships of war, transports, or vessels belonging to the mercantile marine of any nation visiting this port for coals or stores only, and not remaining more than 8 days anchored within the boundaries of the outer harbor or moored at the quays or jetties, and neither landing nor receiving cargo, except as hereinafter provided, will be charged at the rate of.....per ton...	0	4	= 8

Or such vessels may be charged at the following rate:

	s.	d.	Cents.
For the first 24 hours or portion thereof.....per ton...	0	2	= 4
For every succeeding 12 hours or portion thereof.....do.....	0	1	= 2
But no vessel under this alternative scale shall be charged more, in respect to the above dues, than.....per ton...	0	4	= 8
Vessels on their outward voyage, eastward bound, and not breaking bulk nor remaining in dock more than 48 hours, shall be allowed to take in cargo under the lower rate of dock charges, namely, per ton.....	0	4	= 8
Hulks, tugs, coasters, and craft of 50 tons and under, per month of 30 days.....per ton...	0	4	= 8

NOTE.—The above rates are chargeable on the registered gross tonnage, and on each ton of cargo carried on deck, except in the case of steamers, which are allowed the deduction of their engine-room space, and of hulks, which are charged on half their original registered tonnage.

Hulks using the docks under the reduced charge will not be permitted to lie therein longer than is necessary for the discharging or shipping of cargo.

A rebate of 10 per cent is allowed on the tonnage of Her Majesty's vessels of war and bona fide transports, as well as vessels belonging to the colonial government.

REBATES ON IMPORTED GOODS IN CAPE COLONY.

The government of the Colony of the Cape of Good Hope has reduced the rebate on imported goods passing through the colony to the inland states from 5 per cent to 3 per cent. This reduction applies to the South African Republic, Orange Free State, and Rhodesia, and marks an important departure. The colony transit rate has by this act been brought down to the level of the Delagoa and Beira rates, in Portuguese territory, and when Natal has followed suit, which will be soon, it will insure uniformity of the transit rate throughout South Africa. The reduction, it is stated, means a present of between \$250,000 to \$300,000 per annum to the importers of Johannesburg alone. I inclose copy of the schedule.

J. G. STOWE,

CAPE TOWN, *October 13, 1898.*

Consul-General.

GOVERNMENT NOTICE.

TREASURY, CAPE TOWN,

Cape of Good Hope, October 6, 1898.

Under and by virtue of section 5 of the customs union tariff act No. 1 of 1889, his excellency the governor, with the advice and consent of the executive council, has directed it to be notified that from and after the 15th day of October, 1898, government notice No. 155, of the 19th of February, 1898, shall be canceled, and that

on and after that date rebate of customs duty to the extent shown in the schedule hereunto annexed shall be allowed on goods imported or warehoused on importation into this colony, whenever such goods shall be removed overland to any colony, state, or territory outside the customs union, in accordance with the regulations from time to time prescribed in that behalf.

By order.

HENRY DE SMIDT,
Assistant Treasurer.

SCHEDULE.

I. On all goods, wares, or merchandise chargeable with duty under the customs amendment act of 1897, Classes I, III, and IV, rebate shall be allowed to the extent of the difference between the duties specified in the schedule to the said act and a transit duty of £3 for every £100 of the value of such goods, etc.; and such transit duty of 3 per cent ad valorem shall be the "duty less rebate" to be paid on such goods, etc., except as to the following articles, viz:

Cigars, spirits, and wines, on which such a rebate shall be allowed as to grant the importer the option of paying the transit duty of 3 per cent ad valorem, or 6d. (12 cents) per pound weight on cigars, and 6d. per gallon on spirits and wines.

Battery cloth, gauze, netting, sieving, and screening.

Chain.

Cranes, elevators, and sheers.

Crucibles and cupelling furnaces and cupels.

Electric cable or wire and posts for same, and their fittings; lamp-posts (electric) and their fittings; lamps and switches (electric), not including fancy or ornamental lamps, switches, and fittings for indoor lighting.

Felt, covering.

Furnaces for roasting minerals.

Gas pipes, lamp-posts (gas) and their fittings, including lamps.

Gums of all descriptions.

Hose, steam, suction, and armored, for use in connection with machinery, but not including garden.

India rubber for machinery and mining apparatus and appliances.

Lead foil.

Machinery, including spare parts, not enumerated in the free list attached to the customs-union tariff, not being for domestic use.

Molds, ingot.

Mules and geldings.

Ores and minerals, crude.

Plates of iron and steel combined.

Potatoes and onions (not preserved).

Retorts.

Rivets.

Shafting.

Steel and iron chimneys (smokestacks).

Tanks and vats, suitable and intended for mining purposes.

Tin and zinc, in blocks and discs.

Tramway-equipment requisites, such as mean the following: Cars, trolleys, water tanks, and turntables

Valve hide.

Wire, bells, and gongs, signaling, for use in and about mines—
on which rebate shall be allowed of the whole customs duty.

II. On all goods, articles, and things of every description imported or taken out of bond by or for the use of the Government of the South African Republic or Rhodesia, rebate of the whole customs-union duty shall be allowed: Provided, that whenever such rebate be claimed a declaration under the hand of the state secretary or proper officer appointed by the government of Rhodesia shall be delivered to the customs, showing that the goods, etc., are bona fide for the sole and exclusive use of his government, and not to be sold or otherwise disposed of, and that any duty levied thereon would be borne directly and permanently by the treasury of the said Republic or territory.

III. On goods imported through the letter post, rebate of the whole customs-union duties shall be allowed.

IV. In case any goods shall be under entered in value, whether or not they be specially rated articles, the provisions of section 26 of act No. 10 of 1872 shall apply.

N. B.—The following articles are admitted free of duty under the customs-union tariff on importation into this colony, irrespective of their destination:

(51) Agricultural implements and machinery, and all apparatus and plant usually and principally employed in farming operations.

(52) All raw produce of South Africa imported overland.

(53) All articles grown, produced, or manufactured within the union, and brought across any inland border of any state, colony, or territory belonging to the union, except:

(a) Flour, wheaten or wheaten meal, manufactured from other than South African wheat.

(b) Spirit distilled from the produce of and within the union of a class upon which, by way of excise, a duty may at the time of importation into such state, colony, or territory be by its law imposed or levied, unless it be proved that a like duty of not less amount has been paid elsewhere within the union in respect of the spirits so imported: Provided, that, if such a duty shall have so been paid elsewhere within the union, but if of less amount, then there may be by law imposed or levied upon such spirits when imported, a duty of customs not greater than the difference between the excise duty here legally imposed or levied on spirits of the same class and the duty of less amount which has been so paid elsewhere.

(54) Ambulance materials imported by recognized associations, corps, or hospitals lawfully established for instruction or drill in first aid to the wounded.

(55) Anchors and chain cables for the use of ships, tugs, or lighters.

(56) Animals, living, except mules and geldings.

(57) Arms, ammunition, appointments, and uniforms for the regular military, naval, or volunteer imperial or colonial forces of Her Majesty, or for similar or burgher forces of any government belonging to the union.

(58) Asbestos packing and boiler composition.

(59) Atlases, charts, globes, and maps.

(60) Bags (jute) for grain, wool, coal, and other minerals, and jute bagging and sacking in the piece.

(61) Bands and belting of all kinds for driving machinery, binding twine (harvest yarn), boiler tubes, bolting cloth, and mill silk.

(62) Band instruments and stands the bona fide property of any government belonging to the union, or of a regular military or volunteer corps, and not the property of individuals.

(63) Bones, feathers, ivory, hair, hoofs, horns, shells, skins, teeth, wool, and other

parts of animals, birds, fishes, or reptiles not being manufactured, polished, or further prepared than dried and cleaned, but in their raw and unmanufactured state.

(64) Bookbinders' requisites, consisting of boards, cloth, leather, skin, thread, tape, vellum, and webbing.

(65) Books and music, printed, including newspapers and periodicals, not being foreign unauthorized prints of any British or South African copyright work.

(66) Bottles and jars of common glass, empty or imported full of any article liable to a rated duty, and bottles, empty, commonly used for aerated waters.

(67) Boxes, empty, cardboard and wooden, put together or in pieces (shooks) for packing.

(68) Brass and copper and composition metal in bars, ingots, plates, and sheets; plain, including perforated, but otherwise unmanufactured.

(69) Bullion, coin, or specie.

(70) Carriages, carts, wagons, and other wheeled vehicles the manufacture of South Africa, imported overland.

(71) Church decorations, altars, lecturns, pulpits, organs, plate or vestments, and illuminated windows imported by, or for presentation to, any religious body.

(72) Coir, candle wick, cotton (raw or waste), flax, fiber, flock, felt, hemp, and jute, being in their raw or unmanufactured state.

(73) Consular uniforms and appointments and printed official consular stationery.

(74) Cork dust, paper shavings, sawdust, husks, and other waste substances, intended and suitable for use only as packing material.

(75) Corks and bungs, ordinary.

(76) Cups and medals imported for presentation or presented as prizes at examinations, exhibitions, shows, or other public competitions for excellence in art, bravery, good conduct, humanity, industry, invention, manufactures, learning, science, skill, or sport, or for honorable or meritorious public services: Provided, that such articles shall, on importation or delivery free from the customs, bear engraved or otherwise indelibly marked on them the name of the presenter or presentee and the occasion or purpose for which presented.

(77) Diagrams, designs, drawings, models, and plans.

(78) Diamonds and other gems or precious stones in their rough state.

(79) Dye nuts, gambier, myrobolans, sumac, valonia, and other dyestuff in bulk, for leather.

(80) Engravings, lithographs, and photographs, and enlargements or reproductions of the same.

(81) Fire escapes and fire hose and hose reels.

(82) Fire clay, terra alba, and fire bricks.

(83) Fish, fresh, and fish ova; also dried, cured, or salted fish and raw fish oil of South African catching.

(84) Flowers of sulphur and other substances (in bulk), suitable for destroying diseases in animals, plants, or trees.

(85) Fruit, fresh or green, including cocoanuts.

(86) Fruit and other produce, driers or evaporators of.

(87) Glue.

(88) Guano and other substances, animal, mineral, or vegetable, artificial or natural, suitable for use as fertilizers or manures.

(89) Haircloth and springs for furniture.

(90) Ice.

(91) Iron and steel: Angle, bar, channel, hoop, rod, plate, sheet or T; plain, including perforated and galvanized (rough and unmanufactured), not including corrugated sheets.

(92) Lead: Bar, pipe, and sheet.

(93) Leather: Patent, enameled, roan and morocco, and pigskin, in the piece, for boots, shoes, harness, saddlery, cart trimming, and other leather manufactures.

(94) Life boats, belts, and buoys, and other life-saving apparatus imported by any recognized society.

(95) Machinery fitted to be driven by cattle, electricity, gas, heat, hydraulic, pneumatic, steam, water, or wind power, including spare parts; and apparatus and appliances used in connection with the generating and storing of electricity or coal gas, but not including electric cable or wire or the posts for carrying the same, and not including gas pipes, lamp-posts, or lamps or their fittings.

(96) Metal of all sorts in bars, blocks, ingots, and pigs, for founding, not elsewhere described.

(97) Mining buckets, skips, trucks, and tubs, wheeled or otherwise, for hauling minerals or ores on rails or wires.

(98) Packing or lagging for engines and machinery.

(99) Paper for printing books, pamphlets, newspapers, and posters, or for lithographic purposes.

(100) Paintings, pictures, picture books, and etchings.

(101) Pipes, piping, and tubes of earthenware or metal of all kinds for drainage, sewage, irrigation, water supply, or pumping.

(102) Potash and soda, carbonate, bicarbonate, caustic, crystals, and silicate (in bulk).

(103) Printing and lithographic inks.

(104) Printing, lithographing, paper cutting, folding, numbering, and perforating machines or presses; blocks, forms, fonts, plates, rollers, stones, and type, and other apparatus suitable only for use in the bookbinding or printing industries.

(105) Public stores, imported or taken out of bond by and bona fide for the sole and exclusive use of the Government of Her Britannic Majesty or the government of any colony, state, or territory belonging to the union: Provided, that a certificate be delivered to the customs given under the hand of a principal imperial military, naval, civil, commissariat, or ordinance secretary or officer, or under the hand of a secretary to the government within the union, setting forth that any duty levied on such public stores would be borne directly by the treasury of his government; and Provided, further, that no portions of such stores, used or unused, shall be sold or otherwise disposed of so as to come into the possession of or into consumption by any party not legally entitled to import the same free of duty, until the intention so to sell or dispose of the stores shall have been notified to the principal officer of customs in the colony, state, or territory where they were first imported, to whom the duty leviable, according to the tariff then in force, shall be paid by the government selling or disposing of the stores.

(106) Railway construction or equipment requisites, such to mean the following: Rails, sleepers, fastenings for rails or sleepers, girders, iron bridge work, culvert tops, locomotives, tenders, ballast trucks, goods wagons, carriages, trolleys, engine water tanks, turntables, and permanent or fixed signals.

(107) Rattans, cane and bamboo, unmanufactured.

(108) Resin and carbonate of ammonia.

(109) Saddle trees.

(110) School furniture and requisites, being all articles certified by the superintendent-general of education in the Cape Colony, or any official appointed for that purpose in any other colony, state, or territory in the union, to be for use in any public school.

(111) Sculpture, including casts or models of sculpture.

(112) Seeds, bulbs, plants, and tubers for planting or sowing only, under such

regulations as regards edible kinds as the customs authorities may impose to safeguard the revenue against diversion into ordinary consumption.

(113) Sheep dip, sheep-dipping powder, materials suitable only for dip, and dipping tanks.

(114) Specimens illustrative of natural history.

(115) Sprayers and sprinklers and other apparatus for destroying diseases in plants or trees.

(116) Staves.

(117) Steam launches, tugs, and lighters: Provided, that when condemned or landed to be broken up, duty shall be paid at the customs on the hull and all fittings according to the tariff that may then be in force.

(118) Thread, for the use of boot and shoe makers, saddlers, and sailmakers.

(119) Tin and zinc—bar, plate, or sheet, plain or perforated, but otherwise unmanufactured.

(120) Telegraphs, materials for use in construction of telegraph lines.

(121) Tobacco, the produce of South Africa, imported overland.

(122) Tramway construction requisites, such to mean the following: Rails, sleepers, fastenings for rails or sleepers, iron gates, girders, iron bridge work, and culvert tops.

(123) Vaccine virus and toxin.

(124) Vegetables, fresh and green, but not including potatoes and onions.

(125) Water-boring apparatus.

(126) Wine presses and wine pumps.

(127) Wines, spirits, and beer imported direct or taken out of bond by and for the sole use of commissioned officers serving on full pay in the regular military or naval forces of Her Britannic Majesty, subject to such regulations as the customs may make for the due protection of the revenue, provided that if any such liquors shall be sold or otherwise disposed of to or for consumption by any other person not legally entitled to import the same free of duty, without the duty being first paid thereon to the customs according to the tariff then in force, then they shall be forfeited, and the parties knowingly disposing of such liquors, or into whose possession the same shall knowingly come, shall be liable to such penalties as may be prescribed by law.

(128) Wool, straw, hay, and forage presses.

(129) Wire and wire netting for fencing; droppers, gates, hurdles, posts, standards, strainers, staples, styles, winders, and other materials or fastenings of metal ordinarily used for agricultural or railway fencing.

(130) Wire rope.

PROCLAMATION.

Whereas by act No. 23, 1894, entitled an act "to continue with certain amendments the customs duties and transit dues law, 1886," it is enacted that the governor in council shall be and is hereby empowered—

(a) To declare any class of goods to be within the laws and regulations relating to the importation and carriage of goods in transit as if such goods were included in Schedule E of law No. 4, 1886.

(b) To fix the rates of transit dues to be paid on any such goods as last referred to.

(c) To fix a lower rate of transit dues to be paid on any of the goods enumerated in Schedule E of law No. 4 of 1886, as amended by subsequent laws or acts, in

place of the rates appointed therefor by any of the said laws or acts, whether prior or later in date than this act.

Now, therefore, under and by virtue of the said hereinbefore recited powers, I, the governor in council, have ordained and declared, and do hereby ordain and declare, that from and after the 15th day of October, 1898, Schedule E of law No. 4, 1886, shall be amended as follows:

Schedule of goods which may be imported or removed from any bonding warehouse for conveyance beyond the borders of the colony on payment of transit dues upon such goods, at the rates herein specified.

	£	s.	d.
Wines and spirits, all sorts, sweetened or perfumed, or otherwise, and liqueurs and cordials, of an original value of 16s. (\$3.89) per gallon and upward.....per gallon...	0	0	6= \$0. 12
Of an original value under 16s. per gallon, for every £100 (\$486.65) value.....	3	0	0=14. 59
Manufactured tobacco and cigars, of an original value of 16s. per pound and upward.....per pound...	0	0	6= . 12
Of an original value under 16s. per pound, for every £100 value	3	0	0=14. 59
Guns, double-barreled, of an original value in Europe of £8 (\$38.92) or upward.....per gun...	0	5	0= 1. 21
Of an original value in Europe under £8, for every £100 value	3	0	0=14. 59
Guns, single-barreled, of an original value in Europe of £4 (\$19.46) or upward.....per gun...	0	2	6= . 60
Of an original value in Europe under £4, for every £100 value	3	0	0=14. 59
Pistols, of an original value in Europe of £3 or upward, at per barrel	0	2	6= . 60
All other classes of goods, wares, and merchandise (except sugar, saccharum, and reprints of copyright works forbidden to be imported into this colony) not hereinbefore specially enumerated, not prohibited to be imported, not included in the free list (Schedule B) under law 4, 1886, as amended by subsequent laws and acts, and not included in the list of goods free in transit approved by and contained in my proclamation of the 31st day of August, 1897, No. 74, 1897, for every £100 value.....	3	0	0=14. 59

Provided always that, save and except as to the classes of goods which may be sent in transit overland and the rates of transit dues payable thereon, all existing transit rules and regulations shall be and remain in full force and effect; and also provided that the word "present" in my proclamation No. 74, 1897, hereinbefore referred to, is to be taken, when necessary, to refer to the transit duties approved by virtue of the present proclamation.

Proclamations 27 and 42, 1894, are hereby, and I direct that they be, canceled from the 15th day of October, 1898, inclusive.

TARIFF CHANGES IN MARTINIQUE.

The deliberation of the general assembly of Martinique, on the 13th of January, 1897, having for its object to obtain for certain products exceptions in favor of Martinique, has resulted in the establishment of the following duties:

- Cattle (live weight), 13 francs per 100 kilograms (\$2.50* per 220.46 pounds).
- Cows (live weight), 13 francs per 100 kilograms.
- Calves (live weight), 13 francs per 100 kilograms.
- Steers (live weight), 13 francs per 100 kilograms.
- Hogs and pigs (live weight), 8 francs per 100 kilograms (\$1.54 per 220.46 pounds).
- Live game, 20 francs per 100 kilograms (\$3.86 per 220.46 pounds).
- Salt beef, pork, ham, 6.25 francs per 100 kilograms (\$1.20 per 220.46 pounds).
- Smoked beef and tongue, exempt.
- Lard, 7.25 francs per 100 kilograms (\$1.39 per 220.46 pounds).
- Bread, exempt (but pays octroi).
- Flour, exempt (but pays octroi).
- Corn, 2.10 francs per 100 kilograms (38 cents per 220.46 pounds).
- Corn meal, 3 francs per 100 kilograms (57 cents per 220.46 pounds).
- Rice, exempt (but pays octroi).
- Sawed or squared wood of 18 millimeters thickness and over, 30 centimes (5.7 cents) per 100 kilograms.
- Sawed or squared wood above 35 millimeters (1.679 inches) and less than 80 millimeters (3.152 inches), 25 centimes (4.8 cents) per 100 kilograms.
- Sawed or squared wood of 35 millimeters and under, 50 centimes (9.6 cents) per 100 kilograms.
- Rough staves, exempt (but pays octroi duty).
- Charcoal, exempt (but pays octroi duty).
- Empty casks, ready to be used, mounted or in shooks, provided with hoops of iron or wood, other than casks for sugar, 25 francs per 100 kilograms (\$4.85 per 220.46 pounds), which is nearly their total value.
- Staves, dressed and sufficiently finished to be mounted into casks, pay, as above, 25 francs per 100 kilograms.
- Empty casks or hogsheads, in shooks, for sugar, exempt, but pay octroi duty.
- French goods are not subject to the above differential duties, or "droits de douanes," such being imposed only on merchandise coming from foreign countries. The foregoing list notes exceptions to the general tariff in favor of Martinique.
- All other articles contained in said general tariff are taxed the same as they are in France. The revenue derived from the general tariff goes into the colonial treasury as a whole or to the credit of the colonial administration. The municipal or octroi duties, however, are distributed among the communes or parishes in proportion to population.

The same decree of the 27th of August, 1898, modifies the octroi

* Taking the franc at its gold value.

duties, and on such goods as are imported from the United States the following is the local or municipal tariff:

- Butter, in liquid or salted, 8 francs (\$1.54) per 100 kilograms.
- Margarin (oleo) and the other substances destined to replace butter, 20 francs (\$3.86) per 100 kilograms.
- Animal fat, tallow, etc., 5 francs (96 cents) per 100 kilograms.
- Cheese, 10 francs (\$1.93) per 100 kilograms.
- Flour in grain, 8.68 francs (\$1.67) per 100 kilograms.
- Flour (farina) powder, 6.10 francs (\$1.17) per 100 kilograms.
- Oats, 2.75 francs (53 cents) per 100 kilograms.
- Rice (in grain), 1.20 francs (23 cents) per 100 kilograms.
- Tobacco (in leaves or cakes), 25 francs (\$4.82) per 100 kilograms, plus discriminating duty of 30 francs (\$5.74) per 100 kilograms.
- Staves (rough), 25 centimes (4.8 cents) per 100 kilograms.
- Lumber (only imported from the States), no tax imposed by the municipality. but taxed by the differential duty (see previous list).

GEO. L. DARTE,

Consul.

ST. PIERRE, *October 4, 1898.*

CURRENCY IN PUERTO RICO.

I am informed that in the year 1895, up to which time Puerto Rico had for its monetary unit the Mexican silver dollar, Spain called in the Mexican silver dollars from Puerto Rico and issued a special coin known as the Puerto Rican peso, for the exclusive use of the island. Bankers and merchants here inform me that said issue of silver amounted to between 7,000,000 and 8,000,000 pesos, and it is their belief that about 6,000,000 silver pesos are in circulation here at this time. Part of said issue having been carried away and quite an amount having been lost and destroyed, I am of the opinion that 6,000,000 is about the correct estimate of the amount of the silver pesos still in circulation in Puerto Rico and this group of islands. This coin, which is about the size of an American silver dollar, is of light weight and is estimated to contain about 30 to 40 American cents' worth of silver. The peso is the monetary unit—the basis of trade in this group of islands. The Spanish bank of Puerto Rico, which has its headquarters at San Juan, issues paper which consists of "promises to pay" so many pesos. There is also a bank of issue at Ponce which issues the same kind of paper. The silver and the paper money have always circulated at the same rate, excepting during the late war, when the people of Ponce became skeptical concerning the soundness of the Bank of Spain at San Juan and refused for a time the paper of its issue. However, I think the solvency of the Bank of Spain of Puerto Rico, at San Juan, is now a generally accepted fact, and its paper circulates throughout the island as usual. The

peso of this island has always fluctuated like wheat on the Chicago Board of Trade. Since I have been in this island, I have seen the peso nearly at par with American money, and within ten days an American dollar was worth \$1.80 of the peso. Gold was sold here during the war as high as \$2.45, and in some parts of the island, I am told, as high as \$2.70. When the United States army landed at Ponce, the rate of exchange at Ponce was \$2.25, and in other parts of the island it was higher; but our people began to need change, and the bankers took advantage of the situation, with the result that within two weeks United States money dropped from \$2.25 to \$1.50.

PHILIP C. HANNA,
Consul.

SAN JUAN, *October 26, 1898.*

CONDITIONS IN PUERTO RICO.*

I am receiving hundreds of letters from all classes of people in the United States, asking about Puerto Rico. Most of these persons say they intend coming to Puerto Rico for work or to go into business, and they want to know all about the country. To go into detail and answer all these hundreds of letters would require the services of several clerks; but I have said to nearly all these inquirers that no American seeking work should come to Puerto Rico. I have also said to business men in the United States that, in my opinion, they would be disappointed if they came here now to establish themselves; that the time had not yet arrived for an American to go into business in Puerto Rico. I believe the time will come when this will be a good field for the investment of American capital, and when nearly all kinds of business conducted in an American style will be profitable; but that time will not come until the island has American government, until the laws of the United States are enforced and tariff changes made. Then, I believe, this island will take on new life; but our people who think of doing business in Puerto Rico should be made to understand that the existing high duty on American products prohibits their shipping building material, machinery for factories or plantations, etc., or establishing any kind of business with profit. Most of our business men who have come here simply look the island over, pronounce it rich and possessing golden prospects for the future, but decide that it is too early to invest. The American press should inform our merchants and business men of the true situation.

PHILIP C. HANNA,
Consul.

SAN JUAN, *October 25, 1898.*

* This report was given to the press before it reached the Bureau of Foreign Commerce for publication.

OIL TRADE IN JAMAICA.

Consul Dent sends from Kingston, under date of September 6, 1898, tables showing the imports of various kinds of oil into Jamaica during the fiscal year ended March 31, 1897.

Under the present tariff, says Mr. Dent, kerosene oil is admitted in the classification of "petroleum and its products, crude or refined," at a duty of $6\frac{3}{4}$ d. ($13\frac{1}{2}$ cents) per gallon. All other oils pay a duty of 9d. (18 cents) per gallon under the classification of oils.

Imports.

Articles, and whence imported.	Quantity.	Value of total imports.		
<i>Oil for food.</i>				
Cotton seed and cottoline:	<i>Gallons.</i>	<i>£</i>	<i>s. d.</i>	
United States.....	172,993	10,670	0 0	\$51,926.00
Olive:				
United Kingdom.....	68½	28	4 9	137.41
United States.....	33	3	17 6	18.85
Total.....	101½	32	5 10	156.26
Salad:				
United Kingdom.....	126½	25	4 6	122.75
United States.....	0½	0	2 0	49
Foreign states.....	8	2	0 0	9.73
Foreign West Indies.....	1	0	7 6	1.82
Haiti.....	2	2	0 0	9.73
Total.....	137½	29	14 0	144.82
<i>Oils, other than essential or medicinal.</i>				
United Kingdom.....	26,030	2,527	10 10	12,300.28
United States.....	5,470½	514	3 0	2,502.11
Canada.....	1,647	130	0 0	632.64
British West Indies.....	6	1	4 0	5.84
Foreign West Indies.....	30½	2	13 0	12.90
Total.....	33,184	3,175	10 10	15,453.77
<i>Oils for illumination.</i>				
Colza:				
United Kingdom.....	55	6	14 5	32.71
United States.....	2	0	3 0	.73
Foreign states.....	25	1	17 6	9.12
Foreign West Indies.....	5	0	14 0	3.41
Total.....	87	9	8 11	45.97
Cocoanut:				
United States.....	1½	0	3 1	.75
Paraffin:				
United Kingdom.....	50	1	10 4	7.38
Petroleum:				
United Kingdom.....	904½	2	9 0	11.92
United States.....	789,676½	21,035	1 9	102,367.25
British West Indies.....	3	0	1 8	.41
Foreign West Indies.....	2½	0	1 4	.32
Total.....	789,672½	21,037	13 9	102,379.90

Imports—Continued.

Articles, and whence imported.	Quantity.	Value of total imports.	
<i>Oil for illumination—Continued.</i>	<i>Gallons.</i>	<i>£ s. d.</i>	
Naphtha:			
United States.....	16	0 15 0	\$3.65
Foreign states.....	20	0 18 0	4.38
Total.....	36	1 13 0	8.03
<i>Oil for machinery.</i>			
Car journal:			
United States.....	3,919	89 18 2	437.53
Cylinder:			
United Kingdom.....	205½	13 13 2	66.42
United States.....	8,676	107 4 11	521.80
Total.....	8,881½	120 18 1	588.22
Engine:			
United Kingdom.....	2,178	228 14 0	1,111.97
United States.....	9,954	579 12 6	2,772.08
Foreign West Indies.....	106	10 15 0	52.31
Foreign states.....	96	9 9 4	46.07
Total.....	12,334	828 10 10	3,982.43
Olive:			
United Kingdom.....	162½	42 9 8	206.74
United States.....	3½	0 13 3	3.16
Germany.....	4	1 2 0	5.35
France.....	9½	6 0 0	24.33
Haiti.....	2½	0 10 0	2.43
Total.....	182½	50 14 11	242.01
Sperm:			
United Kingdom.....	10	1 10 0	7.30
United States.....	52	1 14 8	8.43
Total.....	62	3 4 8	15.73
Spindle:			
United States.....	1,272	44 6 4	215.67
Palm:			
United Kingdom.....	200	43 14 9	212.85
United States.....	320	29 3 6	141.98
Germany.....	1½	0 10 0	2.43
Total.....	521½	73 8 3	357.26
Signal:			
United States.....	245	20 6 6	98.91

Retail prices (per gallon) of oils in Jamaica.

Description.	Price.	
	s. d.	
Cocoanut oil.....	3 6	\$0.87
Colza oil.....	5 0	1.22
Cotton-seed oil.....	3 0	.72
Engine oil or Gallipole.....	6 0	1.46
Electric oil for illuminating.....	1 6	.36
Harness or neat's-foot oil.....	6 0	1.46
Kerosene oil.....	1 4	.32
Lubricator, Englebert's.....	6 6	1.58
Machine oil, American.....	4 0	.97
Paint oil:		
Raw.....	3 3	.78
Bolled.....	3 6	.87
Sweet oil.....	3 0	.72

HARDWARE AND CORDAGE IN BRITISH GUIANA.

Consul Moulton sends from Demerara, under date of October 20, the following information in regard to the import of certain articles into British Guiana:*

TOOLS.

Vises for engineers and blacksmiths, tongs, anvils, chisels, and hammers are the tools chiefly imported. England sends most of them. They are packed in casks, and the transportation charges are 30s. (\$7.29) per ton weight, or 40 cubic feet. The duty is 10 per cent. The manufacturers' prices are: Parallel vises, wrought iron, to screw on top of bench, weighing $2\frac{3}{4}$ and 4 pounds, \$3.36 to \$3.84 each; best quality, with adjustable head to fix at any angle, weighing 4 pounds, \$7.68 each; combined parallel vise and anvil weighing $3\frac{1}{2}$ pounds and 7 pounds, \$6.96 and \$10.56 each (50 per cent discount is allowed); parallel vises with strong cast-iron bodies and steel jaw plates, jaws from $2\frac{3}{4}$ to $5\frac{1}{2}$ inches, opening from $3\frac{1}{2}$ to 6 inches, weighing $10\frac{1}{2}$ to 70 pounds, \$3.36 to \$13, less $47\frac{1}{2}$ per cent discount; tongs, close and hollow mouthed, 20 cents per pound; side and flat, round and square, 26 cents per pound; paper rake and shovel, 64 cents each, or \$1.92 per set; anvils, single, from \$4.68 to \$5.76 per cwt. net, according to quality; double, from \$4.92 to \$6; chisels, cast steel, flat cross, cut half round, or diamond point, 24 cents per pound; boiler makers' hammers, 30 cents per pound. Forty per cent discount is granted on chisels and hammers. Retail prices, about 100 per cent on landed cost.

* This information was obtained at the request of the Philadelphia Museums, to which it has been forwarded.

IRON BEDSTEADS.

Stump bedsteads, measuring from 6 feet to 6 feet 6 inches by 2 feet 6 inches to 3 feet; French bedsteads with top and bottom rails, from 6 feet 6 inches by 3 feet to 4 feet 6 inches; or with 1-inch posts and brass rails, in same sizes; four-post bedsteads with seven-eighths of an inch posts and no foot rail; or with 1 inch or 1½ inches, no foot rail, all in above sizes; or with 2-inch posts, no foot rail, in sizes 6 feet 6 inches by 4 feet 6 inches to 5 feet—are the varieties imported. They come principally from Birmingham. The manufacturers' prices are: Stumps, from \$2.76 to \$2.94; French, from \$5.14 to \$5.88; French, with 1-inch posts and brass rails, from \$7.32 to \$8.04; four-post bedsteads, in the sizes above stated, from \$5.28 to \$15.36. Discount, 45 per cent and 5 per cent. They retail at 33⅓ per cent on landed cost, the latter including the 10 per cent duty and 60 per cent on first cost. Transportation charges are from \$6 to \$7.20 per ton measurement of 40 cubic feet. The goods are packed in cases for the better quality; the others in straw and bagging.

TWINE AND CORDAGE.

Of rope, 301,908 pounds are annually imported from England and 20,921 pounds from the United States. Of twine, 53,655 pounds represent the average yearly import from England, and 1,079 pounds from the United States. The varieties include manila, sisal, bolt, tarred, spun yarn, and gasketting, brown and colored, sewing and seaming twine. The retail prices are: Manila, from 12 to 16 cents per pound; sisal, 11 to 14 cents; bolt, 20 cents; tarred, 16 cents; spun yarn, 10 to 12 cents; hemp, 12 cents; and flax gasketting, 20 cents a pound. Transportation charges are 30s. to 35s. (\$7.29 to \$8.51) per ton weight from England, \$4.50 to \$5.50 from the United States. The import rate is \$1 per cwt. and 2 cents per pound on twine. Each coil is covered with bagging. Brown twine comes in from 2-ounce to 1-pound balls, and colored in from 4-ounce to half-pound balls, put up in packets of twelve balls each. Ropes are shipped in coils of from 60 to 120 fathoms, and measure from one-fourth of an inch to 6 inches; manila and sisal, bolt and tarred, usually 60 fathoms, and from one-half inch to 4 inches. Spun yarn comes in bundles of from 7 to 10 pounds, gasketting in coils of about 28 to 32 pounds.

VENEZUELAN EXPOSITION IN 1900.

The secretary of the legation at Caracas, Mr. Russell, transmits, under date of November 7, translation of a decree appearing in the Official Gazette, as follows:

The President of the United States of Venezuela hereby decrees:

ARTICLE 1. On the 1st of January, 1900, there shall be opened in Venezuela a national exposition of works of art and of natural, agricultural, and manufactured products. The place for the exposition shall be in this capital, and will be selected later. There shall be exhibited also other objects, which, on account of their importance or value, may be sent for this purpose.

ART. 2. This decree shall be communicated by the Ministry of Internal Affairs to all friendly nations, and more especially to the Latin American countries, in order that they may exhibit their products and be officially represented.

ART. 3. The Ministry of Agriculture, Industry, and Commerce will appoint a board of directors, who shall be charged with the organization of the exposition and the formulation of regulations for the same.

ART. 4. The above-mentioned board of directors will appoint other boards in the different States, and the presidents of the States shall take the necessary steps to cause all the riches and progress of the country to be exhibited here.

ART. 5. The nations that may wish to take part in the exposition must be represented in all and each of the acts which may be decreed to celebrate the advent of the new century.

ART. 6. In the Venezuelan exposition, in addition to the products and articles mentioned in article 1, there will be exhibited the methods of education employed in the country; the methods of application and general workings of science, letters, and art; everything relating to social economy, hygiene, and public charity, systems of colonization, and all branches of national and foreign industry.

ART. 7. The works of art to be exhibited must be sent to the board of directors, together with a statement explaining the object, its character and dimensions, and also whether it has ever been exhibited in any other exposition.

ART. 8. The statements referred to in the preceding article can be sent to the board of directors, beginning with January 1, 1899.

ART. 9. Judges shall be appointed to examine and pass upon paintings, cardboard drawings and sketches, engravings on medals and fine stones, architectural objects, industrial and agricultural products, large machinery and apparatus, scientific works, physical and chemical instruments with their products, and works of art in general. The judges shall be named by the board of directors, with the approval of the President of the Republic.

ART. 10. All products, articles, and works to be exhibited must be marked with the number of their respective sections.

ART. 11. The board of directors shall divide the exposition into sections, and arrange catalogues for each section.

ART. 12. The judges referred to in article 9 shall send to the board of directors their decisions as to the diplomas to be given, said diplomas to be authorized by the Minister of Agriculture, Industry, and Commerce and the president and secretary of the board of directors.

ART. 13. The awards shall consist of gold, silver, and bronze medals and honorable mention.

ART. 14. The Venezuelan exposition shall be closed promptly on the 27th of April, 1900.

ART. 15. The board of directors shall adopt all necessary measures to promote the objects of the Venezuelan exposition.

ART. 16. All the departments of the National Executive shall take all measures necessary for the prompt fulfillment of this decree.

Given, signed with my hand, and sealed with the national seal and countersigned by the cabinet ministers at the federal palace of the capitol in Caracas, October 28, 1898, eighty-eighth year of the independence and fortieth of the federation.

IGNACIO ANDRADE.

COMMERCE OF PARA.

The annual report of Consul Kenneday, of Para (to appear in full in Commercial Relations, 1897-98), contains the following information:

There is a broad and steady expansion of trade throughout the States of Para and the Amazonas. The city of Para, situated only about 100 miles from the mouth of the Amazon River, is the key to an enormous stretch of wealthy country; and indications are that it will become the Chicago of South America. Over one hundred and fifty steamers are employed on the Amazon and its tributaries (about one-third of these vessels belonging to a British company), and the number will be increased materially before the end of the year. The internal communication afforded by the Amazon and its branches is so complete that railroad and terrestrial means of transportation are not needed, except to connect parts of rivers obstructed by rapids. Commerce at Para has developed enormously within the past few years; the custom-house is overwhelmed with work, and there are not at present enough stores to receive the goods as they arrive, although large additions have recently been made. Both lines of steamships running between Para and New York are increasing the number of their ships, as they are entirely unable to carry the heavy freight billed for this section of the country. A short time ago, the two lines made one trip each a month; later a bimonthly service was established; now three trips are made, and I am reliably informed that on the 1st of next January weekly trips will be made. No better evidence could be brought to show the greatly increased demand for United States goods. I learn from the captain of every vessel coming from New York that it is utterly impossible for any one of the steamers leaving that port to clear the freight billed for Para and the Amazon. This statement is gratifying in the extreme, though it is to be regretted that these goods can not be hauled in American ships.

The freight rate from Para to New York is 25 cents per cubic

foot, or, as I am informed by merchants, about 17 per cent less than from here to Europe.

In the absence of printed statistics, it will be impossible to furnish an absolutely correct list of imports. American trade with Brazil, however, has increased tremendously of late years, and the broad expansion in demand can not be regarded as other than encouraging.

The majority of merchants here require from ninety to one hundred and fifty days' credit; some, of course, only ask for half of such time. Germans stand ready to meet all requirements and competition. Our salesmen must expect to encounter sharp competition. A study of conditions is absolutely necessary.

FLOUR AND FOOD PRODUCTS.

We furnish all the flour to this community, and, I am proud to say, there is no room for improvement in this particular article. We also supply the bulk of the hams, bacon, lard, and other articles belonging to this class.

BOOTS AND SHOES.

United States boots and especially shoes are recently securing quite a foothold. German American agents have just received upwards of 9,000 pairs, and one advises me that the attractive finish and superior workmanship enabled him to dispose of all of his consignment, which he had had made specially for this market by a Boston house. This same gentleman has gone to Boston to lay in a much larger line of shoes. He intends to open an American shoe house, confining himself entirely to these goods.

MACHINERY.

There is a broad field for expansion in machinery. This line of industry has made rapid strides in the right direction during the past six months, and would increase much more if our manufacturers would take advantage of this opening. It is my opinion, after a careful canvass, that this trade could be indefinitely increased if a thoroughly competent agent were sent to the spot, one with long experience and practical knowledge, who could explain any article he represented and who knew how to exhibit his goods to advantage. A rich harvest will follow, provided the proper methods are adopted for introducing these articles. Satisfactory results, however, can not be brought about by correspondence; an energetic man must be sent—one who, if he fails at the beginning, will not become discouraged. It is a common occurrence to receive circular

letters from American firms, descriptive of their wares or goods, requesting distribution among the various merchants of this place. In three cases out of four, the circulars are printed in the English language. Everyone who has handled American machinery, of whatsoever nature, praises it in high and unmistakable terms, and if I only had the time, they would seemingly never tire of telling me why they prefer it to that of any other kind.

WINES AND LIQUORS.

The recent development in the United States beer industry in this district is unprecedented, so rapid has been the growth of the sale of "Schlitz" and "Anhauser" (both American manufactures) within the last nine months. Our gins, whiskies, brandies, etc., are also gaining the market. It appears that American beer is suitable for this climate, being light; and it is unquestionably gaining ground.

A good market can be created here for California wines and Kentucky whiskies and brandies, provided the agent can make prices and terms of credit that will enable him to compete with all comers. Tastes and prevailing customs must be studied at every turn.

HARDWARE AND CUTLERY.

There is an excellent opportunity for trade in this line. Every hardware establishment in Para carries some goods manufactured in the United States. Among other articles, I notice the famous Colt's and Winchester repeating rifles, together with many other makes of less reputation. It is to be regretted that, in the absence of statistics, I can not show exactly what proportion of exports each country sends to this corner of the world.

I am convinced that builders' materials could easily be marketed here; also, agricultural implements, such as hoes, shovels, hay-forks, spades, hatchets, and axes. Yale locks, hinges, fastenings, and all kinds of cartridges find a ready sale. A general line of household utensils, in my judgment, would quickly get a foothold here, and a number of other articles which belong to this group.

JEWELRY, WATCHES, SPECTACLES, ETC.

To surrender this rich field to our German competitors without even a struggle would be foolish. I have devoted considerable time to this little group of specialties, and I would make the following recommendations:

For spectacles or eyeglasses, I observe that a metal known as "alloy" is rapidly gaining favor; in fact, a majority of the jewelers here advise me that it will be difficult to market any other kind.

This has also been verified by a traveling agent who handles eyeglasses exclusively.

I am certain that a market could be created here for a cheap line of clocks. Inexpensive watches would sell readily; say, for instance, one selling for from \$4.50 to \$7 or as high as \$9. Of this class, a steamship load can be disposed of here and up the Amazon. One would also have no difficulty in disposing of rolled-gold or cheap plated jewelry.

HIGH-CLASS CONFECTIONERY.

An excellent market can be created here for this class of goods. There is not an establishment in Para dealing in confectionery. A choice line of fancy or mixed candies, together with a general assortment of other articles that are usually carried by similar houses, including, of course, a soda fountain and ice-cream freezer, would probably meet with success.

SEWING AND TYPEWRITING MACHINES.

I believe that not a sewing machine can be found within the limits of this city, or up the Amazon Valley, except of United States manufacture. I have made a careful canvass, and discovered that almost every tailor and shoemaker in the city of Para, as well as a large majority of private residences, owns a sewing machine manufactured in the United States; and it is safe to say that the entire Upper Amazon is amply supplied with American machines. In fact, I have not been able to trace any others.

There are very few typewriting machines in this section of country that are not of American make, and there is a rapidly increasing demand for our machines. This line of goods is slowly but surely finding its way into offices and commercial houses; there is, however, ample room for expansion in this specialty. A rich harvest might be reaped within a very short time, provided a shrewd and experienced agent promptly entered the field. German agents are scattered all over this country, and they are constantly on the lookout for openings of every nature, never allowing a chance to escape. The sooner these goods are placed on the market, the more satisfactory the results will be.

BICYCLES.

The one marked development in this district within the past six months, I hear, has been in the bicycle trade. The United States machine was brought into notice in the following way:

It appears that for some time past, the adoption of a bicycle by the entire police force has been rapidly gaining favor, and, in con-

sequence thereof, a recent special session of the board was called, with a view to putting the question to a test vote. After mature reflection, the officers of said board decided to recommend the adoption of the bicycle. A committee was appointed, consisting of three experts, with instructions to carefully canvass the Para market with a view to securing the most substantial and generally superior wheel for the least money. The committee advised, in the strongest terms, a wheel made in the United States, adding that the latter clearly outclassed any other in the market. The wheels were forthwith adopted. The gratifying result was that the public, appreciating the test, have had their faith in our bicycles greatly increased. The favorable decision of the committee will prove an exceptionally valuable card to American manufacturers in other lines as well as in this.

The future outlook for this particular industry can not be regarded as other than encouraging.

DRY GOODS, HOSIERY, AND NOTIONS.

As in other cases, I find it impossible to obtain exact information as to what extent we supply this line of trade; yet I feel confident that we have a fair share. As regards cotton goods of the coarser and heavier quality, especially in blue, the work of American mills is preferred and has almost wholly supplanted that from the Manchester mills, or from other parts of Europe; and the same is true of spool and machine thread, twine, and cordage. The trade in hosiery is very much divided, every country in Europe, as well as the United States, having a share. A line of flashy silk handkerchiefs would sell, I believe, faster than anything I could suggest.

The principal importers of coal are the Amazon Steam Navigation Company, A. Bernard & Co., the Para Gas Company, Booth & Co., Silva Volhote & Co., and Companhia Urbana (Electric Light Company). There is but little coal brought here from the United States, and it is my opinion that proper steps are yet to be taken in order to create a demand. The amount of coal in port at present is roughly estimated at more than five times as much as was ever known to be in storage in Para before. The English Government bought unusually large quantities of coal during the late war. Up to this writing, our coal has failed to secure a substantial foothold. I believe exports from the United States could be developed.

CARRIAGES AND WAGONS.

Very little, if any, progress has been made in this line. Most of the goods are of home make. From the present outlook, I should

not think one would meet with much encouragement in attempting to market wagons, carriages, and other vehicles in this corner of the world. The same is true of furniture. All such goods are manufactured here, except the finest grades, which are purchased abroad, either in the United States or in Europe.

DRUGS, MEDICINES, ETC.

The terms of credit given by European houses are so much easier that drug dealers prefer to place orders there. They also claim that the packing is more satisfactory. Freights being cheaper to New York than to Europe, there is no reason why, by adopting the proper methods, our manufacturers should not succeed in getting a substantial foothold here in the distribution of various drugs; for instance, cures for chills and fever, rheumatism, neuralgia, headaches, gout, and other complaints common in the tropical climates. It is positively necessary, however, to personally study the market. It is important to state that during my term of office, notwithstanding the many drummers representing American houses who have touched here, not one could speak the Portuguese language.

LUMBER AND DOOR SASHES.

In this specialty, the United States has the market. All the material for manufacturing boxes to hold the rubber, nuts, etc., exported, comes from the United States. I hear that a demand has recently arisen for window frames, doors, and a number of articles of this class. Whenever one branch of industry begins to develop, I find, upon investigation, that it is due, in almost every instance, to energy and perseverance on the part of the representative of such industry.

READY-MADE CLOTHING.

There is no such thing as an establishment in Para carrying ready-made clothing. Everything of the kind is made to order. It would seem, however, that such goods could easily find a market. The cheapest line of clothing, together with calicoes, domestics, and fancy goods, should be sent.

MUSICAL INSTRUMENTS.

There is an unusually active demand in Para for musical instruments, including both those for house and street music; and there seems to me to be a golden opportunity here for some competent salesman.

ASPHALT PAVEMENT.

This pavement is rapidly growing in favor here, and I feel positive that this industry can easily be developed. I have studied the prospects of this specialty, and had interviews with those who are in a position to know, and I believe that a most highly satisfactory harvest will attend effort in this particular branch. A considerable amount of this work has already been finished, but the bulk remains to be completed by contract.

MISCELLANEOUS.

Iron fittings and oil and distemper paints are much in use for houses, and, as every house has a long glass corridor, common glass for window panes is in good demand. Tarpaulins and waterproof canvas can easily be marketed here, on account of the rainy climate. The ordinary waterproof can surely get a foothold, provided effort is made to introduce it in this market. Coal, machine oil, paint, rope, and twine are in demand for the largely increasing number of steamers plying up and down the Amazon and its tributaries. I observe numerous articles of United States manufacture in this market, but so distributed as to render it impossible to even approximate as to what extent our goods have been introduced. Among other things, I see scales, balances, hatchets, axes, knives, oils, paints, varnishes, nails, files, and sailcloth (blue drill) from the United States. The fast-growing requirements leave ample room for improvement in the export of various lines.

Europeans furnish this market with a considerable quantity of canned provisions, but I am sure that the United States has a fair share.

When the fast-growing requirements of this flourishing district are considered, and the fact that there are no signs of any important resource becoming exhausted for a century to come, my recommendations may not seem too strong.

RUBBER IN PARA.

The following extracts are from the annual report of Consul Kenneday, of Para, which will appear in full in *Commercial Relations*, 1897-98:

The condition of the india-rubber market is one of exceptional activity, marked by daily and even hourly fluctuations. The past few days have developed marked signs of an upward tendency. It is impossible to calculate in advance the extent of the Para rubber

crop, though, judging from the present outlook, there will probably be a very large increase over that of last year. It is certain that the rubber-producing area in this Amazon section, recently discovered and untouched, is hundreds of times larger than that now being worked. The price of crude rubber is fixed in the foreign markets, especially New York and London. The buyer, stationed here, carefully watches the market, and calculates his price in accordance with quotations received from those cities. It is very difficult to make a correct rate, so rapid is the exchange.

There entered this port during the fiscal year 1897-98, 22,257 tons of rubber, and of this amount 11,422 tons were shipped to the United States and 10,796 to Europe. The State of Para does not produce more than two-thirds of the rubber shipped through this port, the balance coming from the State of Amazonas, as well as from Peru, Bolivia, etc. This city is a convenient shipping point, on account of its telegraphic and banking facilities. The principal bearing areas in the State of Para are: The islands in the River Amazon, near the city, the principal, Marajo, having an area of 2,500 square miles; the banks of the River Tocantins; the banks of the rivers Xingu, Jary, and Tapajos. The upper and lower districts of the Amazon produce the same kind of rubber, but that coming from the upper river obtains a slightly higher price, being drier by the time it reaches the port of shipment.

The "hevea" tree is not conspicuous; people have traveled thousands of miles through the rubber region and lived for years in the centers of the industry without even noticing it. The newcomer invariably expects to see the familiar glossy, dark-green leaves of the *Ficus*. In appearance, the "hevea" resembles the English ash more than anything else. It grows to a height of upwards of 60 feet. The leaves are trifoliate. The blossoming season is in August, and the fruit ripens in December and January. The seeds should be planted as soon as possible, as they soon lose vitality.

The localities where rubber trees thrive the best are on islands and low ground near rivers, where the banks are periodically inundated. Ground that is above water at all times or that has no drainage is not suitable. The peculiarity of this rubber tree is that it will not grow satisfactorily on cleared or opened ground. It requires the shade of other trees and still air from the time that its growth begins until it becomes an adult tree. Without these conditions, the supply of milk is very much affected. In fact, the tree has been known to die soon after the clearing of ground around it. No cultivation worth mentioning has been attempted in the region of the Amazon. It is considered useless to invest capital in cultivation so long as the Amazonian forests show no signs of exhaustion.

The "hevea" requires about fifteen years to mature; that is too long for the ordinary investor to wait. The area that is known to produce Para rubber amounts to at least 1,500,000 square miles. Further exploration will no doubt show that this area is far underestimated. On the River Aquiry or Acre, one of the tributaries of the River Purus, two hundred trees yield as much as 3 tons of rubber per annum. Great quantities of "hevea" are known to exist on the banks of the Japura, but that district has not yet been opened up.

The Amazonas Rubber Estates Company, Limited (recently organized, headquarters at London, with a capital of £300,000), will have its branch headquarters at Manaus. The director and his assistants are now on the ground, and instructions have been given to begin the collection of rubber. The company's property is situated nearly 500 miles from Manaus, on the River Teffe, and comprises 90,000 acres. The company has contracted for the construction of a steam tug to ply between the estates and Manaus.

The State of Amazonas, like Para, has adopted a gold basis for its budget.

The governor of Para has recently issued an order directing that free passage be given to persons who wish to migrate hither from the drought-stricken regions of Ceara. No doubt the effect will be an increase in the number of rubber gatherers available for the Amazon districts, which has already risen to large proportions; the last steamer from the south having brought about 1,200, making a total of 25,000 immigrants since the first of the year.

The Rubber Estate of Para, Limited (also British, with headquarters in England and branch office here), is a new concern with a capital of £350,000, owning an area of 284 square miles, or about 182,254 acres, containing three thousand rubber roads, of one hundred trees each. The output on these estates has reached in one year 322 tons, and with proper management, I am advised by the most credible authority in Para, can easily be increased to considerably over 500 tons.

Among other articles used in the india-rubber industry is a clay funnel, in shape very much like an ordinary toilet water jug, without a bottom or handle. It is made of the clay that exists in most parts of the Amazon region. The fuel used in the funnel consists generally of the nuts of the following palms: Native name—"Urucuri," "Tucuma," "Inaja;" botanical name—*Attalea*, *Astrocaryum*, and *Maximiliana regia*. It was at one time imagined that the excellence of Para rubber was greatly due to the kind of fuel used in curing it. The palms that furnish the fuel were accordingly transplanted to Africa, with a view to making Para rubber there. The

experiment, however, has not met with success. The reason these nuts are selected in Brazil is because they emit a continuous dense smoke, and are more portable than other fuel obtainable. However, when none of the palms named are accessible, bark and twigs are used as fuel.

Everyone engaged in the forest carries a wood knife. One of its uses is to cut down fuel for the preparation of rubber; the blade is about 26 inches long and about 2 inches broad. All the knives are imported from the United States. Owing to the damp climate, the blades are electroplated, thus preventing them becoming rusty before they are marketed. The handles are made of wood and are carved or inlaid with brass.

The rubber collector's ax is a very small affair. It is required to chip a smooth surface on the bark preparatory to attaching a cup to the tree. The handling of the ax requires great skill, in order not to injure the bark. A smooth surface is made, in order to prevent impurities from mixing with the sap.

The cups are of clay or tin. The former are attached to the bark by means of a little clay. Their weight, however, makes them inconvenient to carry when the trees to be tapped are separated by long intervals; the collector then prefers to carry tin cups, which are much lighter than the others. They easily penetrate into the bark by means of their sharp edges, and hold to the tree without the use of clay. The use of the tin cup, however, is to some extent injurious to the tree.

Part of the collector's outfit consists of a light gourd—large enough to carry the contents of from five hundred to seven hundred cups. A clay bowl is next required, in order to receive the contents of the gourd. It is of sufficient size to contain the product of several days' work before it is cured. The calabash tree provides calabashes, which are employed to ladle the milk from the clay bowl into the mold. A broad-bladed wooden paddle is used as a mold, and is made locally. This completes the outfit for the rubber collector. All these articles are made locally, with the exception of the knives. The axes and the tin cups are manufactured in the towns and villages of the Amazon region.

The collector has to use his knife to cut his way through the undergrowth, and also to cut down a sapling, occasionally, to bridge a rivulet. At times, he is knee-deep in ooze or up to his waist in water. On arrival at a rubber tree, he chips away the rough parts of the bark, makes a more or less smooth surface, attaches a cup, and makes a small gash above for the sap to fall into the cup, and repeats this process in a line around the tree until he has attached six or seven cups. Then he proceeds to the next tree and does the same.

He continues this process until he has tapped from seventy-five to one hundred and fifty trees, which can be done in a day if they are not too far apart. On the following days the gashes in the trees are made a trifle lower down than the first ones. Some collectors tap the trees in the morning and return to collect the sap in the evening, whereas others tap in the evening and collect in the morning. An expert gathers 7 pounds daily in the Lower Amazon; in the Upper Amazon three times this amount is collected.

When the accumulation of rubber is sufficient—usually in three or four days—the collector lights a fire in the hut he has erected, places the funnel over it, pours a thin coat of milk over the paddle, and holds it over the smoke to coagulate. The process is repeated until a large cake has been formed. To release the paddle from the cake, it is necessary to make a slit on one side. The paddle mold makes a cake of uniform and even shape, and is in general use in the State of Para. In other parts, a spit is placed on two upright forked sticks, and given a rotary motion. By this means, the rubber is cured with greater ease. Paddle-smoked rubber is decidedly preferred, as it is drier and seemingly more carefully cured.

Many attempts have been made to introduce improved curing apparatus. Up to this writing, however, they have not been received with popular favor, because the common method, although very primitive, possesses the advantages of being simple and inexpensive. The process of curing rubber is extremely injurious to the eyes. Many cases of total blindness result therefrom.

There are three grades of Para rubber, viz, fine, medium, and coarse. If rubber is not uniform and contains impurities, it is classified as medium. The coarse quality, or "Sernamby," consists of scraps that have not been cured.

Insufficient labor is the most serious difficulty in the rubber industry. It would scarcely seem advisable to invest money in rubber estates, unless the owner can first see his way clear to obtain sufficient labor with which to collect the rubber. In reality, the genuine owner of the produce of the forest is the collector, not the landowner.

As a rule, the landowner makes advances to the collectors for their outfit, food, etc., and in return receives the rubber collected by them. He sells the produce on the collector's account, retaining 20 per cent for himself, and continues making advances in such manner that the collector always remains in his debt and consequently in his service. It frequently happens, however, that the collector takes the advance and fraudulently disposes of the rubber to any buyer who may be on hand. A great deal of leakage occurs in this way, and I believe no method of preventing it has been discovered. This is another of the difficulties of the landed proprietor. One of the methods in practice

is to lease the trees in lots of seventy-five, one hundred and fifty, or two hundred, at a given sum per annum, and to stipulate that the lessee shall sell the rubber and purchase all his supplies from the owner. The lessee works his lot to the utmost, and usually earns a handsome profit after paying the rent, and, although the owner does not obtain the full value of the lots rented, he makes up for it by charging commission on goods supplied, etc.

The profits of the rubber industry would seem to be large, because the employer keeps 20 per cent and makes about the same on the goods supplied the employees; but it must be considered that out of one hundred employees, whose outfit and traveling expenses have been advanced, at least seventy-five die, desert, or return to their homes on account of illness. The expense incurred for them is accordingly a dead loss, and when this is deducted from the total income, the profit is greatly reduced.

The "aviador" is a person who advances supplies and capital to the rubber collector in exchange for rubber. The principal "aviador" resides at the chief centers, and finances a number of smaller "aviadores," who travel about in the rubber industries. The exporters of rubber are mostly agents of United States and British importers. They buy from the "aviadores" in the principal centers.

The following table gives the monthly entries of rubber at the port of Para for the twelve months ended June 30, 1898:

Month.	Entries at Para.	Shipments.		
		United States.	Europe.	Total.
1897.		<i>Tons.*</i>	<i>Tons.*</i>	<i>Tons.*</i>
July.....	970	576	375	951
August.....	1,130	636	372	1,008
September.....	1,640	847	664	1,511
October.....	1,890	1,013	624	1,637
November.....	2,660	1,269	1,350	2,519
December.....	3,150	1,566	1,769	3,335
Total	11,440	5,907	5,154	11,061
1898.				
January.....	3,320	1,428	1,315	2,743
February.....	2,650	1,917	906	2,823
March.....	1,750	955	1,368	2,323
April.....	1,270	427	1,022	1,449
May.....	977	447	637	1,084
June.....	850	341	394	735
Total	10,817	5,515	5,642	11,157
Grand total.....	22,257	11,422	10,796	22,218

* Of 2,204.6 pounds.

The following list shows the principal centers of production in the State of Para and output during the year 1896-97 (later returns not being accessible at this writing):

Center.	Quantity.	Center.	Quantity.
	<i>Tons.</i>		<i>Tons.</i>
Breves	1,497	Muana	173
Anajas	993	Mocajuba	165
Cameta	667	S. Sebastiao	157
Gurupa	565	Chaves	157
Macapa	507	Portel	143
Melgaco	449	Bagre	137
Itaituba	477	Oeiras	133
Mazagao	467	Balao	129
Afua	439	Avelros	89
Curralinho	375	Moju	78
Souxel	339	Abaete	73
Almeirim	285	Alemquer	67
Igaripe-Miry	217	Santarem	55

The prospects for the crop of 1898-99 are promising, for the rains have not lasted as long as usual, and collectors can set to work earlier than usual. Two large steamships loaded down to their utmost with immigrants are now in this harbor, on their way to the rubber fields.

RAILROAD IN PARANA.*

The only road open to traffic in the State of Parana is that owned by the Compagnie Générale de Chemins de fer Brésiliens. It has a total length of 416.995 kilometers (259.12 miles), of which 111 kilometers (68.97 miles) belong to the mountain division (from Paranaguá to Curitiba) and 305.995 kilometers (190.15 miles) to the camp division (from Curitiba to Ponta-Grossa, with branches from Restinga Secca to Porto-Amazonas and Serrinha to Rio Negro). The track has a width of 1 meter (39.37 inches).

On the mountain division, 82,441 tons of merchandise were transported last year, as follows:

Articles.	Quantity.	Articles.	Quantity.
	<i>Tons.</i>		<i>Tons.</i>
Yerba mate	23,788	Cereals	4,208
Lumber and wood	8,381	Sugar	4,048
Flour	5,542	Coffee	295
Salt	5,013		

* Transmitted by Consul-General Seeger, of Rio de Janeiro, in an undated inclosure received by the Department November 1, 1898. This report was prepared, says the consul-general, by Mr. Emil Thon.

On the camp division, in a total of 67,559 tons transported, the distribution was:

Articles.	Quantity.	Articles.	Quantity.
	<i>Tons.</i>		<i>Tons.</i>
Yerba mate.....	25,521	Cereals.....	2,583
Lumber and wood.....	9,749	Sugar.....	1,907
Flour.....	3,265	Coffee.....	330
Salt.....	4,364		

Coffee came nearly all from Santos, while Rio sent only a very small quantity. The coffee grown in the northern part of the State, on the Rio Parana-Panema, and in the adjoining zone of the State of São Paulo, was brought to the nearest localities on mule back.

No special mention has been made in the company's annual report about the quantity of manufactured goods transported, though they certainly represent over one-half of the goods given as "sundries," which represented in the mountain division 25,962 tons and in the camp division 17,054 tons. Of imported goods, 26,326 tons came through the ports of Antonina and Paranaguá.

The movement of passengers has been as follows:

Mountain division:

First class.....	19,527
Second class.....	55,401

Camp division:

First class.....	14,150
Second class.....	37,180

The weight of luggage belonging to these passengers was 605 tons (mountain division) and 365 tons (camp division).

The total receipts were:

	<i>Milreis.</i>
Mountain division.....	1,726,933.678 = *\$208,958.97
Camp division.....	1,525,779.569 = 184,619.32

This was made up from the following sources:

Description.	Mountain division.		Camp division.	
	<i>Milreis.</i>		<i>Milreis.</i>	
Passengers.....	192,332.304	\$23,272.26	219,149.816	\$26,517.12
Luggage.....	39,600.627	4,791.67	24,566.653	2,972.56
Goods.....	1,453,635.995	175,889.95	1,259,193.685	152,362.44
Animals.....	12,383.526	1,498.40	4,088.494	494.71
Vehicles.....	1,221.026	137.74	374.574	45.52
Telegrams.....	7,422.000	898.06	13,136.960	1,589.57
Sundries.....	20,338.000	2,460.89	5,269.387	637.60

* Taking the exchange value of the milreis at 12.1 cents.

Against these receipts, the expenses amounted to 1,036,324.010 milreis (\$125,395.20) for the mountain division, and 1,011,743.635 milreis (\$122,419.98) for the camp division, thus distributed:

Description.	Mountain division.		Camp division.	
	<i>Milreis.</i>		<i>Milreis.</i>	
Central administration.....	74,365.199	\$8,998.19	57,545.622	\$6,963.02
Traffic.....	168,860.405	20,432.11	149,723.901	18,116.59
Rolling material and workshops.....	494,889.937	59,881.68	359,462.804	43,495.00
Road and stations.....	298,208.469	36,083.22	445,011.308	53,846.37

This gives a surplus of 690,609.668 milreis (\$83,563.77) for the mountain division, and 514,035.934 milreis (\$62,198.35) for the camp division; together, 1,204,645.602 milreis (\$145,762.12).

It is not easy to ascertain exactly the amount of capital employed in the construction of the road. The Brazilian Government has guaranteed an interest of 7 per cent for the mountain road on a capital of 11,492,042.707 milreis, or 32,500,000 francs (\$6,272,500), and of 6 per cent for the camp road on a capital of 9,179,855.100 milreis, or 26,000,000 francs (\$5,018,000). This interest, though, has never been reached; so that the Government has been obliged to pay heavy sums to cover the interest guaranteed. The value of the milreis having averaged during the last year only 63 centimes (12.1 cents), while its value at par is given at 2.83 francs (54.5 cents), the capital guaranteed gave only, on the mountain division, an interest of 1.3 per cent, and on the camp division of 1.2 per cent. It is well to add that never has exchange been so low as in the last year; but, on the other hand, since the opening of the road (in 1888), it has never reached its original figure.

Though the interests are fully guaranteed to the stockholders, it would seem at first sight, on examination of the receipts, that railroading in the State of Parana is not a paying business. But it must be remarked that the capital really put in the enterprise is about one-third less than the capital guaranteed, and that a company with no interests guaranteed by the Government would have greatly reduced the expenses, as well in the administration as in the wages of its personnel; so that the road after all can be called a good one.

It must be added that no railroad enterprises should be begun in the southern Brazilian States without Government guaranty or something equivalent. It is understood that the French company is collecting information referring to the topography of the valley of the Tibagi. The Tibagi is the greatest tributary of the Parana-Panema, which marks the limit between this State and the State of São Paulo.

The trunk line of the Sorocaba Railroad, of São Paulo, is to end at the mouth of the Tibagi, so that the prolongation of the French line would bring it in communication with the railroad system of São Paulo and open to culture fertile regions. The distance from Ponta-Grossa to the mouth of the Tibagi in a straight line is nearly 270 kilometers (167.7 miles).

ACTIVITY IN THE KLONDIKE.

The past month has been a busy one for Dawson shipping, some thirty steamers arriving during the month from St. Michaels, Alaska, besides the usual number coming down the river connecting with the passes. Four of the steamship companies had to dispose of their steamers here soon after arrival, in order to get sufficient funds to pay the wages of their crews and other charges against them. The boats were then placed under Canadian registry and now ply on the Upper Yukon route, which has been more profitable for small steamers than the long route from St. Michaels, which entails the risk of stranding on sand bars and the payment of \$15 a cord for wood to feed the boilers during a thirty or sixty days' trip. On some steamers, the passengers were compelled to cut wood and bring it on board ship, on penalty of not being carried to Dawson, and the companies refused to pay them for such work done. There being no court here for the past six weeks, except a police court, the claims of passengers could not be settled. The best way to reach here now is to come in over the passes and by the lakes, and then down the Yukon to Dawson. The quickest way back is to go down the Yukon to St. Michaels and thence via steamer to Seattle, Victoria, or San Francisco. One can go from here to St. Michaels in less than seven days, while coming up against the stream the average time has been thirty days.

Dawson City is beginning preparations for the coming long winter. Large quantities of logs are being placed on the streets in front of business and other houses, to serve as fuel. It takes from 12 to 15 cords to heat a small cabin during the winter.

A great many needed improvements have been inaugurated in Dawson since the advent of Mr. William Ogilvie, the new commissioner. Dawson is soon to be incorporated as a city or town and have its mayor and board of aldermen to look after its local affairs.

There has been no window glass here for over two months, except in small quantities, which were eagerly bought up. Some larger shipments came in last week. One-half of the buildings in Dawson to-day are without window glass. A small light 10 by 12

inches readily brings \$2.50 to \$3. Small fortunes were made by parties who brought in glass and oil lamps. A \$4 lamp in the United States commands from \$18 to \$20 here, and a 5-cent package of carpet tacks will sell for 75 cents.

Notwithstanding the large amount of provisions brought in and on hand, corners on certain articles of consumption are being made. Butter advanced from \$1 per pound to \$2 last week, and the price of condensed milk and other products has doubled.

The weather during September has been very moderate, reminding one of Indian summer in our country.

The winter diggings generally begin about the middle of November. There will be more prospecting done this winter, as more claims have been bought up by parties who will work them. Winter operations may be said to have commenced, as the prospectors have begun to cut their wood for thawing purposes, erect cabins, and freight their supplies to the different creeks. It is safe to say that there will be five thousand people working throughout the different creeks in this district during the coming season.

The bench and hillside claims are now receiving more attention than the creek claims. It has been found that where the creek claims proved to be barren, the bench or hillside claims on the same creek contain rich deposits of ore, and from the output of gold from the bench claims this season, it is expected that the product of next year will equal, if not exceed, the amount of gold taken from the creek claims, unless there are new strikes on some of the creeks not yet worked. The cost of working a bench claim is also much less, because the ground, being shallower to bed rock, requires less timber for burning purposes; and it can also be worked the year round, whereas a creek claim can be worked only during the winter season.

As stated in a former report,* I think it a good time for capital to step in, as there is no doubt of the country being very rich; but money is needed to develop it.

J. C. McCook,
Consul.

DAWSON CITY, *October 1, 1898.*

COMMERCIAL CONDITIONS IN DUBLIN.

In a letter to the National Association of Manufacturers,† dated October 25, 1898, Consul Wilbour, of Dublin, says:

All goods shipped from Dublin to the United States go via Liverpool or Glasgow, none being shipped direct. Ordinary bills of lading are in use, virtually the same as those in the United States.

*See CONSULAR REPORTS No. 218 (November, 1898), p. 432.

†The original has been forwarded.

For freight rates between Dublin and other ports, special terms are given, based on quantity, class of goods, etc. No schedules are published, but the rates may be learned on application to the steamship companies of New York, Baltimore, etc. Port regulations are uniform throughout the United Kingdom, the charges being 21 cents per ton for vessels from over sea and 13 cents per ton for coasters. There are the usual charges for stevedores, labor, etc.

There is no reason why trade between the United States and Ireland should not be largely increased. The following articles are imported in large quantities from Germany, Holland, and Belgium: Wood ware, paper, starch, iron nails and other hardware, brushes, glassware, bottles, leather, oleomargarine and condensed milk. Over 1,000,000 tons of coal were imported in 1897. Bituminous coal is used exclusively, retailing from \$4.50 to \$5.50 per ton. The best of our bituminous coal could be landed here and sold at a handsome profit at a considerably less price than that quoted above. There is a prejudice against American coal, which would have to be overcome.

Timber comes largely from Norway, with considerable shipments from Canada and the United States. The trade in American slates is growing, and could be largely increased with proper facilities for shipping.

TRADE OF BELFAST WITH CUBA AND THE UNITED STATES.

The total amount of exports to Santiago de Cuba from this district, from September 1 to October 1, amounted to \$22,414.95, and were wholly of linens, cottons, and unions, in the following amounts:

Linens	\$18,666.36
Unions.....	2,952.84
Cottons.....	795.75

The general impression among those who are engaged in the linen industry in this city and of that class who are fully advised and able to speak upon the subject is that with the adjustment of the difficulties that have heretofore existed and the guarantee of a secure and stable government, the trade will assume proportions never before attained. For the last two and a half years, the trade has been nearly suspended, and no shipments or sales have been made since last March. Ten years ago, the Belfast trade in textiles with Cuba ranked second only to that of the United States, but gradually dwindled to nothing. The prospects for an improvement

are very encouraging, and a largely increased trade is anticipated and confidently predicted.

The total amount of exports to the United States for the quarter ended September 30, 1897, was \$1,340,992.38, and for the quarter ended September 30, 1898, \$2,057,026.28, showing an increase for the quarter ended September 30, 1898, of \$716,033.90.

The greatest increase was in linen fabrics, which amounts to \$567,263.67. The increase in unions was \$140,949.50; in ginger ale, \$26,100.54; in cottons, \$19,571.29; in threads, \$11,759.48.

The greatest decreases were as follows: Flax, \$41,166.11; tow, \$15,448.58; stationery, \$5,975.41; paper stock, \$754.31.

WILLIAM W. TOUVELLE,

BELFAST, *November 8, 1898.*

Consul.

EXPORTS FROM MANCHESTER.

Consul Grinnell sends from Manchester, October 3, 1898, the following table showing the character and value of declared exports from the consular district of Manchester to the United States (including Manila, Puerto Rico, and Cuba) during the month of September, 1898, compared with the corresponding month of 1897:

Articles.	September, 1898.			September, 1897.			
	£	s.	d.	£	s.	d.	
Buttons.....	3	14	10	\$18.21	73	1 5	\$355.60
Card clothing.....	1,309	18	7	6,374.77	312	16 6	1,522.36
Carpets and rugs.....	2,029	12	1	9,878.65	1,089	14 11	5,396.55
Cattle hair and other hair.....	86	3	11	400.47	2,101	13 5	10,227.79
Colors, dyestuffs, and chemicals.....	10,547	8	5	51,329.03	8,934	17 2	43,481.49
Cotton and worsted and worsted stuffs.....	1,298	10	4	6,319.23	465	10 5	2,265.47
Cotton piece good.....	24,077	12	7	117,173.78	11,321	5 9	55,095.05
Cotton velvets, fustians, etc.....	28,552	3	5	138,949.14	11,351	7 3	55,241.41
Cotton-velvet skirt bindings.....					171	15 8	835.38
Cotton yarn and thread.....	10,123	1	0	49,263.58	3,954	3 6	19,232.99
Curtains, laces, etc.....	3,398	15	3	16,540.08	1,921	4 3	9,349.58
Damasks, etc.....	8,656	18	8	42,128.97	1,887	7 7	9,184.93
Earthenware, china ware, etc.....	128	12	9	626.01			
Elastic web, cord, india rubber, etc.....	1,080	11	8	5,258.66	1,044	19 0	5,085.25
Felt hats.....	2	9	0	11.92	234	1 11	1,139.23
Handkerchiefs.....	7,031	10	3	34,218.86	1,982	7 1	9,647.13
Hosiery.....	1,305	10	0	6,350.78	145	5 6	706.98
Iron, steel, etc.....	2,559	8	2	12,455.36	948	15 7	4,617.23
Leather and hides.....	6,804	11	6	33,114.46	6,197	18 10	30,162.28
Linens.....	8,734	13	8	42,507.34	1,224	15 5	5,960.37
Machinery.....	10,224	2	1	49,755.60	4,203	3 11	20,454.85
Mahogany logs, oak logs, etc.....	723	2	6	3,519.08	2,211	12 10	10,762.95
Miscellaneous.....	989	10	10	4,815.60	400	3 9	1,947.51
Paper, paper stock, etc.....	2,647	0	3	12,881.63	1,226	3 4	5,967.14
Quilts.....	638	13	1	3,107.11	512	1 3	2,491.95

Articles.	September, 1898.		September, 1897.	
	£ s. d.		£ s. d.	
Rags, paper stock, etc.....	3,568 9 1	\$17,365.88	3,100 3 4	\$15,086.06
Shawls, etc.....	419 17 0	2,039.06	78 18 11	384.19
Silk and silk and cotton piece goods.....	879 18 1	4,282.05	452 10 9	2,202.27
Silk noils and waste.....	347 19 2	1,693.34	922 16 8	4,442.30
Silk yarn.....	2,355 10 5	11,463.14	1,160 19 8	5,649.92
Tape, braid, etc.....	1,818 13 9	8,850.64	1,175 13 6	5,721.42
Towels.....	1,921 15 11	9,352.42	581 3 10	2,828.37
Wool felt, blanketing, lapping, etc.....	623 11 10	3,034.71	755 0 9	3,781.42
Worsted yarn.....	64 18 0	315.84		
Yarn, other.....	21 2 8	102.85		
Total.....	144,975 10 9	705,523.45	72,133 13 3	352,035.24

Consul Grinnell adds that the increases are mainly in white and printed cotton goods, all of which could be made in the United States.

WAGES OF WELSH TIN WORKERS.

There has been a great deal of uneasiness prevailing in the tin-plate trade of South Wales, not merely on account of the continued depression, in consequence of which a goodly number of workmen are still idle, but in view of the fact that the employers have resolved upon a reduction of wages. The report of the employers was issued yesterday and a Cardiff newspaper comments as follows:

Our readers will have noticed many references in our columns to a "new wage list" for the men engaged in the tin-plate trade. This new wage list was brought into existence and afterwards adopted by tin-plate employers who controlled about nine-tenths of the tin-plate trade. According to the new list, the mill men are to be paid by weight; whereas by the list now in existence, known as the list of 1874, they were paid by area, with extras for heavy plates. Thus, the principle upon which payment is now made will, if the new list be ever adopted, be entirely changed. The adoption of this list by tin-plate employers is significant of the change that has taken place in the tin-plate trade, and, drastic though the changes proposed may be, they are based upon a principle long advocated by the workmen—uniformity of wages, maintained by the joint power of masters and men.

It is too early yet to ascertain what attitude the workmen will take; but it is reported that their secretary has said that the tin platers would not agree to work on the wage rate proposed, but would willingly agree to what would commend itself to them as being a reasonable wage arrangement if accompanied by some means of preventing the "step after step" reductions taking place. He asserts that numbers of men are now working at a 25 per cent reduction of wages.

It is evident already that there is a great deal of misunderstanding as to what the precise position of affairs is. A joint conference

had been expected, but did not take place, owing, it is said, to the hostile attitude of the men. On every hand throughout the trade, it has been felt for a long time past that something definite should be done in the way of securing uniformity in the wage rates, which, as the result of American competition, have been greatly reduced all round, but not equally so, some of the workmen having succeeded in getting better terms than others. The organization of the employees does not appear to be more powerful now than it has been for several years past, and, although in most instances they will suffer under the proposed arrangement, it is notorious that at several works now running larger reductions have been enforced than are proposed by the suggested list. Owing to the unity of the employers, however, the management of these works have agreed to fall in with the other employers at a pecuniary loss for the purpose of insuring uniformity.

DANIEL T. PHILLIPS,
Consul.

CARDIFF, *November 2, 1898.*

TRADE CONDITIONS IN EASTERN SPAIN.

Commercial affairs are in a more promising condition of late, and activity in the business class is noticeable; confidence seems to be restored. To favor the export trade of Spanish products, the Government has abolished the export tax of $2\frac{1}{2}$ per cent, which was established during the late war, but the effect of which was only to hamper trade, without any special benefit to the treasury.

Indications of greater activity were already shown in the returns of shipments during the month of September, viz:

Articles.	Quantity.		Articles.	Quantity.	
	<i>Kilograms.</i>	<i>Pounds.</i>		<i>Kilograms.</i>	<i>Pounds.</i>
Almonds.....	476,600	1,050,712	Red pepper (ground).....	23,564	51,949
Dried figs.....	19,235	42,404	Rice.....	3,726,332	8,215,072
Goatskins.....	23,949	52,798	Tiles.....	19,599	43,208
Sheepskins.....	68,363	150,713	Tomatoes.....	4,120	9,083
Garlic.....	2,550,216	5,622,206	Wool.....	16,632	36,667
Melons.....	3,416,781	7,532,635		<i>Liters.</i>	<i>Quarts.</i>
Onions.....	6,146,197	1,354,059	Oil.....	10,310	10,895
Peanuts.....	16,905	37,269	Spirits.....	4,000	4,227
Potatoes.....	32,220	71,632			<i>Gallons.</i>
Pomegranates.....	947,946	2,089,842	Wine.....	14,162,500	3,738,900

As the export tax was collected on these goods, hopes for an improvement in this shipping trade during the coming season are well founded.

This year's raisin crop at Denia is estimated at about 500,000 quintals (110,203,000 pounds) and is of excellent quality; 315,000 quintals have already been exported, and a stock of about 200,000 quintals is calculated to be left. Prices opened at 20 pesetas (\$2.25) and are now 16s. (\$3.89) f. o. b. Denia, with an active demand so far.

In onions, a very lively trade has been kept up all through this summer; 332,000 cases were shipped, principally to English ports, but of late some 40,000 crates were also exported. Since this mode of packing is only for the American market, it is a pity that there was no opportunity for direct shipment to the United States, as the transshipment via England must have increased the cost of this vegetable.

Oranges promise a very abundant yield this year, the weather having been very favorable throughout. The quality is also expected to be good and sweet, and orders from the United States are expected, since the Florida crop has not yet recovered its normal state and California oranges will not reach the Eastern States until after Christmas. Direct shipments would also favor this trade.

The saffron season ends this month with the stock completely exhausted, and high prices prevail. The new crop is expected by the end of this month.

Among the principal articles of import from abroad, this province requires, next to coal, lumber for building purposes and staves for its wine trade. Several cargoes have arrived here by steamer of late and more are expected. Petroleum will be more consumed this winter, stocks being very low. American tobacco will likewise have a chance again, the late demand having been filled with Hungarian leaves. The introduction of bicycles seems to be opportune. Chainless bicycles are offered so far only by France and are expensive, and on that account not in favor here. Old styles, at a reasonable price, would sell easily. The most ordinary American make is superior to any European manufacture so far introduced here.

The high rate of exchange, the principal impediment to the import trade, has of late declined somewhat and favors the importation of such raw materials as are needed for Spain's industries. This opportunity has been grasped by merchants, and several large orders are said to have been given of late. Commercial travelers from foreign countries have already appeared in great numbers, and everything indicates prosperity for the coming season.

TH. MERTENS,
Consular Agent.

GRAO, *October 15, 1898.*

BELGIAN COAL PRODUCTION IN 1897.

The total amount of coal produced in Belgium during the year 1897 amounted to 21,492,446 tons, representing a value of 220,672,100 francs (\$42,589,715.30) and exceeding by 240,076 tons the production of 1896, which was considered the largest ever realized in Belgium.

Of the total production, 1,979,039 tons of coal were consumed by the various services connected with the mines. The 19,513,407 tons remaining, or the net production, yielded 209,596,100 francs (\$40,452,047.30), or an average price of 10.74 francs (\$2.07) per ton. The number of persons employed in the mines during 1897 was 120,382, or an increase of 1,136 over the number of 1896. From 1891 to 1897, the number of women and girls employed in the interior of the mines gradually decreased from 3,611 to 636, or 83 per cent; and during the same period, the number of boys declined from 8,610 to 6,027. In 1897, the minimum age for girls employed in the mines, interior or exterior occupation, was 19 years. In 1898, the age limit is fixed at 20 years.

There were paid in wages 123,258,500 francs (\$23,788,890.50), or an average annual salary per laborer of 1,023 francs (\$197.44), or 53 francs (\$10.23) more than in 1896. Deducting the sums retained for mutual-aid associations and for supplies advanced to miners, the net annual wage was 1,006 francs (\$194.16), and the daily wage 3.40 francs (65.6 cents).

Other expenses amounted to 77,856,850 francs (\$15,026,372.05), or a total expense of 201,115,350 francs (\$38,815,262.55).

The total amount produced having been 220,672,100 francs (\$42,589,715.30), the round total profit amounted to 19,556,750 francs (\$3,774,452.75), which corresponds to a profit of 91 centimes (17.5 cents) per ton, or 40 centimes (7.7 cents) more than in 1896.

During the year 1897, there were forty-eight strikes throughout the various mining sections, of which one, occasioned by posting the rules regulating workshops, reached serious proportions. Out of the forty-eight strikes, only four, having as motive increase of wages, were partially successful. It is estimated that 464,500 working-days were lost by strikes and some 1,579,300 francs (\$304,804.90) to the miners.

I am indebted for a great deal of the valuable information contained in the above, to an interesting report recently published by Mr. Em. Haize, director-general of Belgian coal mines.

GEO. W. ROOSEVELT,
Consul.

BRUSSELS, *October 18, 1898.*

No. 220—6.

IMPORTATION OF CATTLE AND FROZEN MEAT INTO BELGIUM.

Consul Roosevelt sends from Brussels, October 31, 1898, copy of a memorial addressed to the Marquis of Salisbury by the British section of the Anglo-American Chamber of Commerce of Belgium on the importation of cattle and frozen meat into Belgium. The consul has inclosed a letter from the secretary of the chamber of commerce, in which the British Foreign Office, acknowledging the receipt of the memorial, expressed itself as being not without hope that some modification of the restriction on the importation of live cattle may be accorded.

The memorial reads as follows:

A MEMORIAL ON THE IMPORTATION OF CATTLE AND FROZEN MEAT INTO BELGIUM, ADDRESSED TO HER MAJESTY'S PRINCIPAL SECRETARY OF STATE FOR FOREIGN AFFAIRS.

MY LORD MARQUIS: The British section of the council of the Anglo-American Chamber of Commerce (in Belgium) desires respectfully to draw Your Lordship's attention to the existing total prohibition by the Belgian Government of the importation into this country of live cattle from Canadian ports, and to the unreasonable regulations under which alone British colonial refrigerated and frozen meat can be admitted into Belgium.

An important commerce in live cattle and frozen meat had sprung up in the port of Antwerp, greatly to the advantage of Canadian cattle breeders, and also to British shipping, which was specially adapted for the trade.

The above-mentioned disabilities constitute a grievance to such of Her Majesty's subjects as are interested in these important branches of international commerce, and occasion a heavy loss to those who were previously engaged therein. It is now four years since the Belgian authorities, under the pretext that one or two beasts landed ex. steamship *Canada* from Montreal, in December, 1894, were suffering from pleuro-pneumonia, issued an order absolutely prohibiting any further importations.

The shipment consisted of three or four hundred head of cattle, and on that occasion the most conclusive scientific evidence was tendered to the effect that the animals in question were suffering only from broncho-pneumonia, or an ordinary cold; and the proof of the correctness of this diagnosis is that during the period of thirty to forty-five days during which this shipment was quarantined, not a single additional animal contracted any disease. Yet this evidence was rejected.

Meanwhile, although the Belgian authorities have thought fit to reject all applications for the removal of the prohibition, Canadian cattle are successfully imported into the United Kingdom, and reasonable regulations have sufficed to encourage and extend this branch of commerce to enormous proportions. In 1897, there were imported into Great Britain no less than 126,495 head of Canadian cattle.

The facts placed at the disposal of this chamber of commerce lead to the conclusion that no single case of pleuro-pneumonia has occurred among cattle imported from Canada into the ports of London, Liverpool, Hull, or Glasgow for a period of three years; and even on the occasion which breaks the long previous records, the single case was open to doubt.

This council desires to point out that, although cattle from British colonies are rigorously excluded, Dutch cattle are allowed to be imported into Belgium under certain restrictions, although pleuro-pneumonia is well known to exist in Holland. If, therefore, Great Britain enjoys the advantages of the "most-favored-nation clause," we respectfully submit that her subjects are entitled to equal privileges.

A trade in frozen meat was established in the port of Antwerp in 1887, warehouses for the reception and cold storage of the meat having been erected, and was in course of satisfactory development, manifestly to the advantage of New Zealand and Australia; and in this branch of commerce also British shipowners would have largely benefited. The Belgian authorities, however, declared that, in order to determine if the imported meat was fit for food, the lungs should remain attached to the carcasses; and although this restriction is no longer enforced in the case of mutton, the effect has been, as was intended, totally to suppress the further importation of British colonial frozen meat, the presence of the lungs preventing the carcasses from being stowed in the usual way on board the steamers and presenting other insuperable difficulties. Yet frozen meat is imported from our colonies in enormous quantities and with beneficial results into the United Kingdom, where proper supervision is found to afford the requisite protection against the introduction of diseased carcasses. The success attending these precautionary measures, it is believed, sufficiently disposes of the question of the necessity for the lungs to remain attached to the carcasses as a means for the detection of disease.

The proviso of the adhesion of the lungs has been recently rescinded as regards mutton, but a duty which is practically prohibitive to importation is retained.

The precautions taken by the exporters are well known and understood in British ports by the inspectors appointed to examine these importations of frozen meat; but similar restrictions have not sufficed to satisfy the Belgian authorities, and the trade is at present arbitrarily suspended.

The council of the Anglo-American Chamber of Commerce having very fully examined the subjects in question, can not avoid the conviction that certain private interests have been permitted to counteract the public advantages undoubtedly to be derived by the Belgian population at large from the unrestricted importation of wholesome and cheap food; and they would draw Your Lordship's attention to the fact that, while the vexatious prohibitions above mentioned are in force, the traffic in old and worn-out horses for slaughter as an article of food is permitted in Belgium.

The British section of the Anglo-American Chamber of Commerce (in Belgium) rely upon Your Lordship's readiness to assist them, by making such representations to the Belgian Government as may cause a cessation of the above grievances and trust that the present position of Her Majesty's subjects formerly engaged in the importation of cattle and of frozen meat and in the carrying of the same to the port of Antwerp will be fully considered by Your Lordship, with a view to the abolition of the existing vexatious prohibition and restrictions.

In his annual report (to appear in *Commercial Relations*, 1897-98), Consul Roosevelt says:

The following modifications in the existing laws relative to the examination of animals slaughtered on account of disease and the importation of meats into Belgium have recently been put into force:

In communes where there are no public slaughterhouses, and where the sanitary service is confided to a veterinary surgeon, Government veterinaries are authorized to examine animals slaughtered on account of disease and which have been previously treated by them.

In communes where there is an expert veterinary, and an expert not a veterinary, the declaration of slaughter is addressed to the latter and transmitted at once to the Government veterinary, when it concerns the slaughter of diseased horses and cattle.

Articles 1, 3, and 8 of the royal decree of December 14, 1897, are replaced by the following stipulations:

Entry into Belgium of meat, fats, and offal—fresh, prepared, or conserved—coming from animals of the bovine, ovine, caprine, or porcine species, is authorized only through customs bureaus or branches at the frontier or in the interior designated by the Minister of Agriculture and Public Works and at days and hours determined by the Minister of Finance.

Importation of horse meat, fat, and offal, prepared or conserved, is prohibited. Meats and fats destined for public consumption can not be delivered for that use until examined and recognized as in fit condition by the veterinary charged with the control of live cattle coming into the country, or by other expert agent appointed for such work. The examining officer affixes his stamp after the inspection. For prepared or conserved products, the stamp may be affixed on the case or receptacle.

NEW TELEPHONE BUILDING IN BRUSSELS.

There has recently been erected in this city a spacious building to be devoted exclusively to the telephone service of the country, and, as now expected, it will be open to the public some time during the coming year. The building is situated in the old quarter of the city, the selection of the location being no doubt influenced by economical reasons, as the land was Government property. The construction of the building has cost very nearly 1,000,000 francs (\$193,000), and there will be commutators for 15,000 subscribers.

The building comprises a basement, ground floor, and three stories. The room devoted to the commutators has a length of 147 feet, a width of 65 feet, and a height of 30 feet. The various stories are reached by two stairways, one of generous proportions exclusively for the public and the other of narrow dimensions devoted to the use of the personnel of the service. When the building is entirely completed and ready for public use, each subscriber will have connection with the central by a double wire.

On account of the large number of overhead traction cables already existing in this city and the impossibility of a much further increase in the number or dimensions of telephone-support frames (chevalets), it has been decided to put nearly all the wires of the Brussels telephone service under ground, and in consequence cables containing two hundred wires will be placed in underground conduits, to be distributed in the various quarters of the city. When necessity presents, one or more of these cables will be carried over-

head, attached to a chevalet placed on a house top, and distributed to subscribers in that locality.

The building will be heated by the system (patented) of Mr. L. d'Anthonay. A gas machine of 3 horsepower will operate a turbine which forces cold air in the heating apparatus and drives it into the various rooms when at proper heat and moisture. This system permits the admission of air wherever desired. It reduces to a minimum the amount of humidity and dust resulting from heating and ventilation, two causes exercising the most harmful influence upon the working of apparatus for telephonic communication. Another advantage resulting from this system of heating is the power of cooling the air in the building during the summer.

Below the massive concrete foundation, a series of iron rafters has been laid to facilitate the flowing of electricity into the ground. Steel shanks are attached to these rafters and connected with the iron pieces of the building in all directions in such manner that the entire construction is united in a Faraday cage, which thoroughly protects it against lightning.

Every possible precaution has been taken to render the building fireproof. A large number of fire escapes will also be added.

GEO. W. ROOSEVELT,

BRUSSELS, *November 9, 1898.*

Consul.

THE BELGIAN POULTRY INDUSTRY.

Since the publication five years ago of the consular report* treating this same subject, many modifications deserving mention have occurred. Great progress is to be noted on the part of Belgian poultry raisers in the improvement of breeds, the care of the poultry yard, the importance of the expositions, the official instructions given to farmers, and the formation of associations devoted to aviculture.

It is the purpose of this report to avoid any repetition of the details heretofore published; it will be confined to a statement of the changes which have occurred and the improvements which have been introduced during recent years in the Belgian poultry industry.

Besides the varieties formerly mentioned and which have increased in value, there are to be noted some new breeds, for a long time existing in the poultry yards, but which were formerly only slightly observed by reason of the little attention then given in these regions to aviculture. A slight description of these unnoticed breeds will not be out of place.

* See CONSULAR REPORTS No. 159 (December, 1893), p. 481.

The Herve chicken is black in color and has a moderate single, straight comb, reddish brown eyes, red gills and ear lobes, small roundish wattles, stocky neck, and abundant flesh. The breast is rather strongly developed, and the vertical tail is quite well feathered. The legs, of a very dark bluish or blackish color, are not long. This fowl is healthy, active, and rivals the best layers. It is originally from the district of Herve (hence its name), in the province of Liege, where it has long been known to farmers. It has, however, been much neglected and bastardized with breeds of lesser value.

The Manheid is similar to the Herve; it has the same characteristics and differs only in its plumage and its height, both of which are less developed. In color, it is blue black or light ash blue. Its comb is single, straight, not too large, and slightly notched. Its eyes are reddish brown, its ear lobes bright red, and its wattles are not highly developed. The shading of the neck is darker than the remainder of its plumage; the breast is rather wide, the tail slightly developed, the legs bluish gray and mostly covered. It is a very good layer. The Herve and the Manheid weigh about $4\frac{1}{2}$ pounds each.

The Cotte de Fer (the Ironsides) resembles the Herve, but is stronger, slightly taller, of a very proud carriage, and with a very thick plumage of bluish-gray color, like the cock of Malines. The comb is large, straight, and finely notched. The eyes are dark gray, the gills and ear lobes red, and the wattles elongated. The neck is rather long, arched, and delicate; the breast developed and deep; the tail very erect, rather well developed, quite long, and very bushy. This fowl stands higher than the two first mentioned, is a very good layer, and weighs about $5\frac{3}{4}$ pounds.

The Combattant of Liege has a height of about 2 feet 8 inches for the cock and 1 foot 11 inches for the hen, and weighs from $8\frac{1}{2}$ to 13 pounds. Its white eggs weigh from 2 to 3 ounces. Its plumage is variegated, golden, bluish, grayish, yellow, and red. The last coloring is the most highly esteemed. The comb is single or double (the first preferred); the eyes are dark gray; ear lobes red. It has little flesh, but a very strongly developed chest; muscular and strong shoulders; long legs, bluish black in color; and a rather heavy tail, which is almost always black. Although the Combattant of Liege is still kept for the cock pit, it is also beginning to be esteemed for its "poulets de grains" (grain chickens), by reason of their abundant white and savory meat.

All these fowls are found in the province of Liege, and are popular.

This province, which formerly neglected the poultry yard and produced only Italian bastard fowls, has in recent years made great

progress in aviculture; its poultry yards have indeed become the most productive since the Liege Avicultural Union, with its seven hundred members, entered on the road of advancement. This association, although including a hundred poultry raisers of great merit, is especially due to the initiative and high ability of Mr. Dardenne, of Devant-Le Pont-Vise, through whose long-continued efforts poultry raising in the province of Liege has been so greatly developed.

On the other hand, scarcely any attention is given to aviculture in the provinces of Limbourg, Luxembourg, and Namur. The province of Antwerp is also not distinguished for its progress, notwithstanding the fact that its farmers give great care to their fowls, and that these latter produce a good quantity of eggs, which, while not large, are delicious.

The Campine fowl, as bred in North Brabant, is there called the Zundert fowl; and a goodly number of the "poulets de grains" (grain chickens) sold at Breda, Rotterdam, and elsewhere in Holland are Campines purchased in the province of Antwerp by Dutch poultry dealers, which, on crossing the Dutch frontier, are known as Rysbergen fowls. The Campine fowl always remains the best layer. It attains annually the number of two hundred eggs, without any special care, and it is not surpassed by any other layer in Belgium.

One variety, known as the Braekel, in reality a Campine, but larger and laying slightly heavier eggs, is found in a more or less pure state on Flemish farms. These fowls, besides being the best layers in the world, furnish an egg of exquisite taste and very precocious chickens, distinguished by a meat equal to the finest bird. The Braekel derives its name from Neder Braekel, a commune in southern Flanders, where this fowl is chiefly found. The markets of the neighborhood are renowned for their capon fowls. Indeed, when buying young cocks, you are at once asked to capon them, thus increasing the value of the meat. Southern and western Flanders enjoy a large trade in eggs with the cities on the French frontier, where dealers come every week to buy them by thousands.

The fowl of the province of Brabant, known as the Brabançon, is a variety once forgotten on the farms, but now being revived, thanks to the great ability of Mr. Louis Vandersnickt, of Brussels, who first drew attention to it. It exists throughout the province, is renowned for its laying ability and its excellent meat. It is not, however, entirely pure, by reason of its mixture with foreign fowls. Great efforts are also being made to find the Flemish five-toed fowl, which for centuries was the pride of Flemish farmers, as much for the quantity of its eggs as for its meat; but its descendants are only poorly characterized.

Within a few miles of Brussels the breeding of the Coochoo of Malines is becoming daily more and more important. Fattened specimens of this race, called Brussels fowls, are being marvelously perfected. The breeding and fattening of these fowls give employment to hundreds of peasants. There are specialists who thus prepare as many as 1,000 to 1,500 chickens every three weeks. The sale price varies from 58 cents to \$1.35 apiece, according to the season. The Coochoo of Malines sits summer and winter, and, as a result of great care by skilled breeders, a sufficient number is raised for the demands of the annually increasing trade. In the vicinity of Merchtem, there is found a variety of Coochoo of Malines known as the Coochoo of Merchtem, which is gradually surpassing the other varieties in weight and delicacy of meat.

Everywhere on Belgian farms, a large number of fowls of mixed Italian, Brahmapootra, Cochin China, Langshan, Houdan, and Spanish blood exists; but in recent years, farmers are more and more raising native breeds of pure blood.

Fifteen years ago, Italian varieties were introduced into all the communes of the country in the hope of obtaining eggs in winter. A reaction has, however, taken place, it being found that the Italian fowl is worn out here after two years; that it has a wilder nature than the native fowl. When introduced into the farmyard, it also infects the other fowls with diphtheria, thus causing the loss of numbers of native fowls; furthermore, its meat is tough.

More than twenty avicultural societies exist in Belgium, with the object of improving the native races and of increasing their production. The methods employed by them are the free distribution to their members of eggs of pure breed, the organization of prize shows and expositions, cooperative sales, and public instruction by newspapers and lectures.

A federation known as the Federation of Belgian Avicultural Societies, under the presidency of the distinguished poultry raiser Mr. Nypels, of the Ghent Zoological Garden, and patronized by the Belgian Government, has this year united all the avicultural associations of the country into one body, for the purpose of reinforcing the efforts made by them to improve the products of the poultry yard.

Expositions have accomplished much in Belgium. Formerly, foreign and fancy fowls were mostly exhibited; only during the past few years have native breeds occupied the first rank, by reason of number and quality.

Under the direction of the Belgian Minister of Agriculture, lectures on poultry raising are given to every group of aviculturists who express a desire for them. Under the influence of this instruc-

tion, it is now remarked that the coops are much better kept than formerly, that much greater care is given to the nests, and that the food is much better prepared. Thus corn, formerly almost exclusively used as food at all seasons, is being replaced by a more varied diet, according to the time of year and its products—cooked potatoes mixed with grain and milk served tepid in winter, buckwheat, barley, wheat, oats, and, occasionally, in summer, hemp seed. It should be noted here that the use of crushed oyster shells is scarcely known.

The principal object of Belgian aviculture is the production of eggs, relatively, many more eggs are produced than formerly, because, first, the fowls are much improved from the point of view of reproduction; and, second, farmers begin to understand that spring hatchlings lay in winter, while late hatchlings and old hens give little profits.

The production of fattened fowls, of poulets de grains (grain chickens), and of hens for laying form notable branches of industry.

The number of fowls on each farm varies from 300 to 500. The figure of 500 is reached in northern Flanders and in the provinces of Liege and Hainault. The price of eggs varies from 1 to 3 cents, according to the season. Of late, eggs are being sold through the intermediary of the numerous cooperative dairies founded by farmers, to the full satisfaction of their members. A paid agent collects the eggs weekly and tests them in the presence of the owner; subsequently they are packed in baskets and sent by the society to the large cities or abroad.

The raising of turkeys, geese, and other fowls of the barnyard is mostly left to amateurs and is without great importance. It is only in remote districts—especially in southern Flanders and the vicinity of Furnes—that there are met flocks of turkeys or geese driven along the roads, to be fattened in November and to be sold in Brussels or London at Christmas or New Year. Some very few breeders of pheasants are also found in the same vicinity.

Artificial breeding is practiced in almost all avicultural establishments, but it is not yet adopted by farmers to any extent. One society at Thielt holds a hatching machine at the disposal of its members, who are very well satisfied with the results attained.

The avicultural journals of Belgium are:

Chasse et Peche (Chase and Fish); editor in chief, Mr. Vander-snickt, Brussels.

Le Mentor Agricole (Agricultural Mentor); editor in chief, A. De Wall, Brussels.

L'Union Avicole de Liege (the Avicultural Union of Liege); editor in chief, J. Dardenne, Liege.

L'Aviculteur Belge (the Belgian Aviculturist); editor in chief, Berger, Enghien.

Landbode, of Brussels, the one Flemish paper of its kind.

There are from 200 to 300 poultry breeders of importance in the country, of whom the principal are: Moons-de Coen, at Calmpthout; Breydel, at La Hulpe; Pulinckx-Eeman, at Wachtebeke; Mine-Dansart, at Haeltert; Elevage des Bruyeres, at Mont St. Guibert; Herman Bertrand, at Foust lez Bruxelles; Alfred Colle, at Tronchiennes; F. Delchambre, at Chateau de Melen par Micheroux, Liege; F. D'Aubrey, at Boitfort; Denis Moris, at Putte lez Malines; Smits Fils, Chaussee de Tournhout, at Borgerhout, Antwerp; L. Sas, Rue de la Monnaie, Malines.

The systems of artificial breeding employed are the Haeltert (Belgian), the Haerson (London), Voitelliers de Perpignan (French), Rouillers Arnault (French), and Philippe (French) apparatus.

My thanks are due to Mr. A. Lamont-Hecke, of Evergem, official lecturer of the Ministry of Agriculture, who has kindly supplied me with most of the above details.

HENRY C. MORRIS,

Ghent, *September 26, 1898.*

Consul.

IMPORTATION OF LIVE HOGS INTO FRANCE.

In reply to an inquiry* from Nebraska, Consul-General Gowdy sends the following from Paris, November 3, 1898:

There are no laws or regulations which prohibit the importation of live hogs into France from the United States; but the importation of live cattle, such as cows, bulls, or steers, from the latter country is absolutely prohibited.

The animals, upon arrival, are subjected to a sanitary examination by one of the official veterinary surgeons detailed for the purpose, and if found healthy are allowed to enter the country; but if any contagious disease is detected, the animal is killed at once and the others put under strict surveillance.

The expenses attending the landing of hogs at Havre can be considered as about 1 franc (19.3 cents) per head. This amount includes the different port charges, such as "droit de statistique," etc., weighing at the custom-house, sanitary inspection, etc. In addition to the above, there is a charge of 7 centimes (1.35 cents) per head per day for the use of the cattle pens belonging to the chamber of commerce, when the hogs are kept before loading them on the cars or sending them to the city abattoirs.

* Copy of Advance Sheets has been sent to inquirer.

The duty on hogs is 2.1 cents per pound; sucking pigs weighing 55 pounds and under, 57.9 cents per head.

For killing hogs at the abattoir, the cost is 4 centimes (0.772 cent) per kilogram (2.2 pounds) of neat meat.

The following table shows the importations and exportations of hogs for the first eight months of the years 1898, 1897, and 1896, general commerce, for the whole of France:

Country.	Importations, first eight months.			Exportations, first eight months.		
	1898.	1897.	1896.	1898.	1897.	1896.
	Head.	Head.	Head.	Head.	Head.	Head.
Holland.....			42,141			
Spain.....	5,611	836	8,967	1,485	2,934	559
Free Zone.....	1,897	1,018	1,324	8,040		
Algeria.....	4,412	1	88			
Switzerland.....				22,070	27,675	19,689
Other countries.....	2,954	475	13,452	2,214	27,466	12,914
Total.....	14,874	2,330	65,972	33,809	58,075	33,162
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
Weight.....	2,919,280	388,740	12,025,640	7,260,000	12,329,680	7,317,528

Of the above importations and exportations, it can be said that none came into or out of France by water through the port of Havre. The number of live hogs killed at the abattoirs of Havre in 1896 was 13,619; in 1897, 11,768; and up to September 20, 1898, 9,392.

It can not be said that there is an actual shortage of hogs in France this year, but I have been told by good authorities that there have not been as many hogs raised this year as last.

The following are the prices per kilogram (2.2 pounds) for the different animals this week, at the abattoirs at Havre, on foot:

Description.	First quality.	Second quality.	Third quality.
	Cents.	Cents.	Cents.
Steers.....	25	23	21
Cows.....	23	21	19
Calves.....	32	29	25
Sheep.....	34	31	28
Hogs.....	27	25	23

If there should be any evidences of contagious or dangerous diseases in a consignment of cattle of any kind, not only is the animal infected killed at once, but the flesh is destroyed and the whole herd is placed under strict surveillance.

I am informed that hogs are seldom imported by water into any

of the seaports of France. They are generally brought over the frontiers from Switzerland, Germany, Belgium, Italy, and Spain.

The sanitary inspection is for the purpose of discovering if the animals are suffering, principally from the following diseases: Aphtœ fever, rouget, infectious pneumo-enteritis. If they have the aphtœ fever, they are sent to the abattoirs and killed for immediate consumption.

In case of the hogs being attacked with the two other diseases, they are also sent at once to the abattoirs; but they can not be allowed to be sold for consumption, unless the sanitary inspector of the abattoirs, after an examination, is satisfied that there would be no danger from the use of the meat. Suspected animals, or those which have been in contact with sick animals, are marked and rejected, and must be sent out of the country unless the importer prefers that they be immediately killed and sold.

The production and the consumption of all live animals in France this year are very nearly balanced, with the exception of sheep. There is more demand for these animals than for any other live stock.

MARKS ON GOLD AND SILVER WARES IMPORTED INTO SWITZERLAND.

My attention has recently been called to the fact that United States firms which have been shipping gold-filled watch cases into Switzerland have subjected themselves to fines, on account of having put stamps on the cases which were contrary to the Swiss laws. The United States laws perhaps allow the stamp 14k or 18k to be affixed to filled watch cases; but the Swiss law demands such stamp to represent the quality throughout the article. Gold-filled cases can only have the stamp "Gold filled," and the additional stamps of 14k or 18k will be considered an evasion of the law. The goods will be confiscated, and an additional fine will be imposed.

I append extracts from the Swiss laws, with which our manufacturers should be thoroughly conversant.

Article 41 of the law of November 15, 1892, says articles plated with gold or silver can only be stamped "Gold plated" (plaqué or) or "Silver plated" (plaqué argent).

Besides these words, nothing else is allowed, especially nothing which could produce on the mind of the buyer an erroneous impression of the value of the metal; consequently, no such designation as "Plated with gold 18 carats" (plaqué or 18 carat), "Plated with gold 14 carats" (plaqué or 14 carat), or "Plated with silver 0.800" (plaqué argent 0.800). The marks "18 carats," "14 carats," and

"o.800" are designations to be applied to goods consisting of gold and silver as defined by articles 1 and 2 of the federal laws—*i. e.*, gold and silver of specified fineness throughout. The stamping of these goods is obligatory.

ART. 42. Whenever gold or silver ware is found to contain either in parts, inside or outside, a less degree of fineness than the stamp indicates, and after a test this fact is confirmed, those goods shall be confiscated and destroyed, independent of punishment according to law.

ART. 43. As deceptive, are declared stamped gold or silver ware where the inner, not visible, parts contain an alloy or other substances of less fineness than the main part of the article.

ART. 44. Stamped ware declared to be deceptive shall be destroyed by the sworn assayer, independent of penalty adjudged.

The following is from the report of the Federal Department of Commerce, Industry, and Agriculture for the year 1897, to which the department of assay belongs, showing the stand taken by the chamber of commerce to protect the interests of the Swiss manufacturers in this line:

In October last, the chamber of commerce of Neuenburg directed our attention to the fact that a certain quantity of plated watch cases stamped as 14k were imported from the United States into Switzerland. We therefore directed our inspectors to watch the ports of entry of Locle, Pruntrut, Basel, and Verrières, and to be particular as to the entry of watches or cases from the United States. Thanks to the energetic work of our force and to the support received from the federal customs officers, we were enabled to discover the delinquents, who were punished with a heavy fine. This unlawful opposition would have entailed a great loss on our manufacturers had we not put a stop to it at once. The reshipment of those cases from this country would be as goods of Swiss manufacture, thereby bringing in bad repute the reputation of the federal assay office.

In view of the fact that a number of our manufacturers have been severely fined for the evasion of this law, although perhaps unintentionally, I think the widest publicity of the Swiss laws on the marking of gold and silver articles should be given.

ADOLPH L. FRANKENTHAL,

BERNE, *October 17, 1898.*

Consul.

ECONOMIC CONDITIONS IN GERMANY.

Consul Halstead sends from Birmingham, October 27, 1898, an article by J. A. Ford, which appeared in the London Daily Mail. It outlines, says the consul, the phenomenally rapid progress of German trade and commerce, quoting the statement of Professor Blondel, the French statistician, attributing it to the temperament of the German people, the system of education, and the methodical adaptation of the results of scientific research to industrial and commercial

practice. Mr. Halstead believes that to the reasons given must be added the eager celerity with which the Germans seize upon and copy the good points of manufacture in other countries.

The inclosure reads, in part:

GERMAN PROSPERITY.

[From the London Daily Mail, August 25, 1898.]

The idea prevails in England that all that comes from Germany is cheap and bad. It suits the German that the English hold this view and neglect to secure themselves and their markets abroad against a quiet but sure—very sure—and keen competitor who, after having learned the ways and methods of British trade, seems determined to excel his teacher.

A short tour through the chief German manufacturing districts would soon show that the Germans are in possession of some of the finest machinery in the world, and that they know how to use it. Circumstances, such as the Welsh coal miners' strike, the coming into force of the new navy bill, etc., have combined to make the present year an eminently prosperous one for German trade and commerce, and therefore for the country at large. The mine owners and manufacturers have been quick to profit by the fortunate conjuncture, and, wisely enough, have employed the extra gains in renewing and improving their machine plant, thus increasing the dividend-earning power of their business for years to come.

One can hardly take up a German newspaper without reading that the "increasing importance" of this or that industry demands this and that attention, etc. Returns given in half-yearly reports of industrial and commercial enterprises almost invariably show a steady rise of business during late years. High dividends are the order of the day, and capital is plentiful. I may mention, incidentally, that some fifteen or twenty years ago very many of the gas and water works in Germany were financed and managed by Englishmen; nowadays, the corporations are taking these matters into their own hands.

The development of commercial cities is indisputable evidence of the great increase of the prosperity of the nation. Since 1870, the trade of Hamburg has increased twelvefold, that of Antwerp (which depends largely on German trade) eightfold, and that of Bremen fivefold. Such notices as the following, which I take from this morning's papers, are of frequent occurrence:

"The rapid development of Kiel compels the rebuilding of the inner town, the improvement of the principal thoroughfares, etc. This is about to be carried out at a cost to the town of about £200,000."

As regards Berlin, it is almost a case of Aladdin. The business part of the city has been transformed during the last few years.

That the finances of the country are in a flourishing condition is proved by the fact that no new taxation will be imposed to defray the costs of the navy bill and of the projected improvements and additions to the army. The city of Berlin has just closed its financial year with a surplus of over £500,000, while the preceding year gave a surplus of £400,000.

Another evidence of the sound state of the finances is that the new Prussian Diet will be asked to grant £20,000,000 for the construction of a ship canal between Berlin and Stettin. The project has been under discussion for several years, and there is little doubt but that the Diet will give a ready assent. It would have been brought forward earlier, but had to give way for the North Sea-Baltic Canal.

With a very few exceptions, all the great industries and branches of commerce show a phenomenal expansion during the last decade. For example, the tonnage of steamships belonging to Hamburg, which in 1875 was 88,173, was, in 1897,

481,699. Those belonging to Bremen increased in the same time from 65,070 to 226,009; while the tonnage of sailing vessels belonging to these two ports has risen over 60 per cent.

The Germans are especially proud of the efficiency they have attained in shipbuilding. They claim now to produce vessels as good as any that ever left a British shipbuilding yard, and that their only reason for still having ships built in England is that they can not themselves execute the orders with which they are flooded. I learn from an authoritative source that no shipbuilding yard in Prussia can accept a contract for large vessels during the next two years. I may also mention that while other nations are discussing the advisability of compelling owners of passenger steamers to provide their vessels with adequate water-tight compartments, the Germans have already adopted the regulation.

According to figures published by the German Lloyd, the registered tonnage of sea-going vessels built for German account in 1896 was: In Germany, 94,897; and in England, 98,087. In 1897, the figures were: In Germany, 183,177; in England, 27,419. The immense increase of the trade of the country has necessitated a corresponding extension of the railway system, which, as is known, is worked by the State. Last year, the profit from Prussian railways paid the whole of the interest of the national debt and still left a balance of £1,000,000.

It is almost superfluous to add that, in electrical matters, Germany takes the leading place among the nations of Europe. According to *Industrie Electrique*, Germany has 711 miles of electric railways and tramways, equal to those of all the rest of Europe together. England is credited with a modest 98 miles. Most of the larger towns of Germany have electric tramways, and the whole tram system of Berlin will, by the year 1901, be converted into an electric one. When all these renewals and extensions are being carried out, it is not to be wondered at that the coal and iron trade is in an extremely flourishing condition. Reports from the Rhenish Westphalian mining centers announce that orders for export have to be refused, as, in spite of every effort, it is impossible to keep pace with home orders.

From Silesia come similar glowing accounts of business exceeding expectations, of large and increasing orders from Austria and Russian Poland, etc. The official *Imperial Gazette* has just published statistics according to which the coal sold in Prussia during the first six months of 1898 exceeded that sold during the same period in 1897 by 3,536,000 tons, and employment was given to 24,000 more men.

The same story can be told of nearly every other trade. That the working classes share in this prosperity is shown by Government statistics of the workmen's insurance and the income-tax returns. (In Germany every person pays income tax whose annual income exceeds £45.)

The workman in this country is in a better position than is generally supposed, though there is, of course, still room for improvement. All the social legislation of late years has been directed towards the protection and elevation of the working classes. The masters at first murmured bitterly, complaining that the increased expense incurred by compulsory contribution to the State workmen's insurance fund and by appliances for prevention of accidents, etc., made competition with other nations impossible. Time has shown, however, that these measures have reflected also to the profit of the employer.

The Parisian statistician, Professor Blondel, who recently drew up a comparison of the progress made by France and Germany during the last twenty-five years, entered into a disquisition on what he terms the "phenomenally rapid progress" of German trade and commerce. He attributes this to the three following causes: The temperament of the German people, the system of education, and the methodical adaptation of the results of scientific research to industrial and commercial practice.

The effects of Prussian militarism and officialism on the nation must not, however, be overlooked. Whatever evil influences these carry in their train, it must be remembered that for years the officials, military and civil, have served their country well for a miserable pecuniary return. And among officials must be included the clergy and elementary and high-school teachers. The nation has risen at the expense of the individual, and now the turn of the latter has come to profit from the success of his self-sacrifice.

Officialism and militarism are also responsible for the almost painful thoroughness with which everything German is carried out and which has contributed largely to the present prosperous condition of the nation.

EFFECT OF EXCHANGE LAW ON GERMAN GRAIN TRADE.

The law governing exchange transactions (which was the subject of a report from this office*), enacted by the Imperial Reichstag, preventing time-delivery contracts, with a view to lessening speculation in stocks and grain, has been dealt with in recent annual reports of several German chambers of commerce. I quote from the former report sufficient to show the nature and intent of the law:

It is the purpose of the German Government to exercise severe control over stock-exchange transactions and the issue of bonds and stocks by new companies, with a view to lessening speculation and protecting the public from fraudulent or uncertain financial and commercial enterprises.

A comprehensive law to this end has just been adopted by the Reichstag by an overwhelming majority. It is likely to cause a revolution in the present stock-exchange methods. In the first place, it is intended to discourage stock speculation by forbidding certain Börsen-Termin-Handel (exchange time contracts) for grain as well as stocks and bonds. The Government will assume a certain control over all stock-exchange business, with special reference to the listing on the stock exchange of new issues of stocks and bonds or paper of new companies. It will endeavor to maintain less fluctuating and, as the agrarians hope, higher prices for grain and mill products, by forbidding all time-delivery contracts being made on 'change for such grain and product. The rapid growth of stock speculation in Germany and the heavy loss experienced by the public, are said to have caused this legislation to have been set afoot and adopted. It is more likely, however, to have emanated from the agrarians, who think, by such legislation, to bring about an increase in the price of grain and produce in Germany.

Extracts from the reports of the chambers of commerce are given herewith. The Bromberg Chamber of Commerce proposed the repeal of the law, on account of its supposed disadvantages. This is not, however, generally advocated by the others. Even those chambers opposed to the law consider the proposal for its abolition premature. Opinions are, as a rule, influenced by local conditions. Wherever stock-exchange elements are dominant, the law is condemned almost without exception; Berlin, Frankfort, Königsberg,

* See CONSULAR REPORTS No. 191 (August, 1896), p. 750.

and Magdeburg, for instance, are arrayed against it. The commercial corporations of many industrial towns have not referred to the consequences of the exchange law in their 1897 reports.

The chamber of commerce at Münster says:

As regards time-delivery transactions in grain, the grain and flour-milling trades in our district were never so dependent on the Berlin Exchange as seems to have been the case in the Bromberg district, according to the report of its chamber of commerce. Here reasons have not yet made their appearance which would seem to call for the repeal of the law forbidding time-delivery grain contracts.

The chamber of commerce at Hagen says:

We emphasize that since the existence of the new exchange law, the grain trade has become quieter, steadier, and more independent of the influences of speculation.

The chamber of commerce at Hanover expresses itself in these terms:

The assertion that if time-delivery grain contracts were not forbidden, the rise in prices, which in the meantime took place, would have become still more important, is at least risked by experts. In no case can it be admitted that the law has been injurious to agriculture. The places and opportunities of quotation have been considerably increased since the new law entered into force, and in our district the farmers neither asked nor obtained lower prices than hitherto.

Lastly, the chamber of commerce at Duisburg writes:

The canceling of time-delivery contracts has proved favorable for transactions in goods actually on hand, while business has been guided into more regular channels and no longer suffers under the restless and artificial tendencies of the Berlin time-delivery exchange as heretofore. Though business has experienced many vicissitudes, in the Duisburg fruit market no difficulties arose as to price making from the want of the Berlin time-delivery quotations. It is considered a matter for congratulation that the abuse of exchange gambling has now been stopped in the German markets. Against its reintroduction, lately proposed by the Bromberg Chamber of Commerce, our flour millers and the greater part of our grain traders would protest.

THOS. EWING MOORE,
Commercial Agent.

WEIMAR, *October 11, 1898.*

CONSUMPTION OF INDIAN CORN IN GERMANY.

The import of indian corn into Germany is of especial interest to Americans. The past decade has witnessed a phenomenal growth in this trade. The first imports took place in the fifties and were of slow growth at first, but during recent years, they have been far more rapidly developed than those of any other cereal coming through the North Sea ports. This rapid increase is a sign of the increase in German cattle raising, and the dependence of German farmers upon foreign cattle foods. In 1897, it was perhaps especially due to the damage caused by rain to the oat crop.

The principal and almost only source of corn supply is the United States. Bremen and Hamburg are the great corn-importing centers of Germany. In the year 1897, the arrivals of corn at Hamburg were 618,861 tons, valued at 42,000,000 marks (\$9,996,000); and at Bremen 242,954 tons, valued at 16,000,000 marks (\$3,808,000). The increase over 1896 was most remarkable—nearly 50 per cent.

It has been stated that in the first half of last year the cargoes discharged were almost without exception in damaged condition; in some cases, to the extent of from 30 to 50 per cent. The earnest representations which have been made in the United States in this connection, which are in the interest of the shipper, will, it is hoped, have effect. Most of the corn imported at Hamburg finds its way to the Upper Elbe and Oder region, the shipments thither in 1897 amounting to 380,000 tons and forming one of the most important articles of freight transported on the Elbe. The export by rail is unimportant, amounting in 1897 to 32,131 tons.

Corn is exported from Hamburg to Denmark, and is also sent to Schleswig-Holstein, Mecklenburg, and the Prussian seaports on the Baltic. Small shipments are also made to other European countries and to the Cape Verde and Canary islands; also, in 1896, to the Cape of Good Hope.

Corn is fed to cattle in Germany. Its use as an article of human food has been practically unknown. There seems no reason why corn meal should not be as much used here in bread making and in the preparation of other food as in the United States. There is a field here of vast possibilities, and one that would seem to require but little effort to secure.

THOS. EWING MOORE,
Commercial Agent.

WEIMAR, *September 25, 1898.*

TURF BRIQUETTES IN GERMANY.

About two years ago, experiments were commenced in manufacturing briquettes from peat or turf. It is now very evident that this new adventure will meet with success. The process of manufacturing is as follows:

After the turf has been cut from the moor, it is brought in a wet condition to a breaking machine, which reduces it to small pieces, whence it passes to a second machine, where it is cut and ground quite fine. The turf is then dried by passing through a large cylinder, filled with exhaust steam from the engine. The inside of the cylinder is filled with large tubes, after the style of a boiler, resting at an angle and continually revolving. This permits the mull to

pass through perfectly dry. From here it is carried to the hopper which feeds the press. The press, which forms the briquettes, is operated by a 75-horsepower engine and finishes one briquette with each stroke.

The machinery in use at present can be improved in many respects, and can be made to press more than one briquette at a time. The capacity at present is about 80 briquettes a minute, or 35 tons a day, while the presses used in manufacturing briquettes from bituminous coal and anthracite (from slack and screenings) have a capacity greatly exceeding that of the turf press. Coal briquettes retail at 90 pfennigs (21 cents) per centner (112 pounds) and average 98 briquettes to a centner—about $4\frac{1}{2}$ briquettes for 1 cent—while the turf or peat briquettes retail at the rate of 130 briquettes for 15 cents, or more than 8 briquettes for 1 cent, making a very cheap fuel.

In addition to cheapness, it has other merits. It is clean in handling, packs very nicely in bins, gives a good heat, and in a closed stove with only a slight draft will remain in a glowing state for ten hours. In an open fireplace or grate it naturally burns much quicker. Only a few men are required to operate the machinery. Women or small boys are employed in stacking the briquettes. The cost of material and working 1 ton of briquettes at Langenberg, where one plant is located, is estimated at about \$1.55. With improved machinery and better facilities, the cost could be reduced. The figures of cost of production, etc., are based on the German scale of wages—75 cents a day for a man and 25 cents per day for a woman. The machinery is patented in Germany and England.

JOHN E. KEHL,

STETTIN, *October 25, 1898.*

Consul.

PFAELZER WINES AND THE HARVEST OF 1898.

As a considerable quantity of excellent wines is exported from this consular district to the United States, and as the harvest of 1898 is considered a failure both in quantity and quality, a brief review of this industry may be of interest.

The northern half of the Grand Duchy of Baden, coming within this consular jurisdiction, yields but a limited quantity of wine for export; but that portion lying beyond the Rhine, known as Rhenish Bavaria, or more popularly as the Pfalz, the most fertile area of the Kingdom of Bavaria, produces large quantities of wine, from the cheapest Haardt to the most costly Deidesheimer.

The Pfalz covers an area of about 592,800 hectares (1,464,809

acres), of which over 15,400 hectares (38,053 acres) are planted with vines, though not all are as yet productive. The figures given in the following table represent the area planted, the area yielding grapes, and the quantity of wine obtained therefrom from the years 1891 to 1896, inclusive:

Year.	Area planted.	Area yielding grapes.	Wine obtained.	
	Hectares.*	Hectares.*	Hectoliters.	Gallons.
1891.....	14,219.70	12,858.30	229,787	6,066,377
1892.....	13,765.76	12,240.98	335,023	8,864,607
1893.....	14,184.99	12,764.84	519,981	15,727,498
1894.....	14,422.19	12,883.11	308,340	8,140,176
1895.....	15,030.64	13,255	203,952	5,384,533
1896.....	15,383.57	3,752.85	770,421	20,339,114

* 1 hectare=2.471 acres.

It will be observed that the quantities given for the years 1893 and 1896 are unusually high, and further reference will be made to the quality of the respective products.

The harvest of 1897 may be said to have begun about the 20th of September for the picking of the Portuguese variety, and the 10th of October for the white varieties, chief among which is the so-called Oestreicher. The yield was greatly reduced by the attack of the "sour worm," which affects the bunches of blossoms as well as the fruit itself, and by decay. The quality of the wine, however, was good, though the prices at which the must, or new wine, was sold were modified by the quantity still in the hands of the dealers from the preceding year, and the more limited demand from purchasers; the American trade, it is claimed, having been very materially affected both by the increased duty and by the Raines law, which interfered with the retail trade. The exportation of the finer bottled wines of Switzerland, Italy, and Belgium was also less than usual, because of the high duty in those countries, in consequence of which the German dealers demand a reduction of the duty equal to that upon wines sent in the cask. The trade with Austria is for similar reasons correspondingly reduced, and a reduction of tariff is also asked of Austria.

The wines vary in quality according to the seasons, but very greatly also according to the location and soil. Those grown southward from the Haardt toward Weissenburg, in Alsace, along the Haardt Mountains, contain a considerable quantity of acid and bring about \$7.14 per hectoliter (26.418 gallons); while those obtained from Neustadt northward as far as Dürkheim and environs, with the exception of those from Deidesheim, Ungstein, Forst, and Wachenheim, usually fetch from \$11.90 to \$23.80 per hectoliter. The wines

from the localities excepted average in price from \$25 to \$50 per hectoliter.

The following table shows the locality where the vines are grown, the name of wine, and the prices obtained in the year 1897:

Locality and name of wine.	Price.	Quantity.
Gleiszellen.....	\$2.26 to \$2.38	<i>Liters.*</i> 50
Bergzabern.....		
Godramstein.....		
Edesheim.....		
Hainfeld.....		
Burweiler.....	2.02 to 2.40	40
Edenkoben.....		
Weyer.....		
Markammer.....	2.13 to 2.40	40
Alsterweiler.....		
Diedesfeld.....		
Hambach.....	2.62 to 2.74	40
Neustadt.....		
Haardt.....		
Mussbach.....	2.62 to 2.86	40
Gimmeldingen.....		
Königsbach.....		
Wachenheim.....	3.33 to 3.57	40
Dürkheim.....		
Ungstein.....		
Deidesheim.....	2.86 to 3.33	40
Forst.....		
	3.81 to 4.76	40

* 1 liter=1.0567 quarts.

All of these prices refer to the new wine, or must, resulting from the freshly crushed fruit. The 40-liter measure is common in the Pfalz, and is there known as the logel. It is usually employed to carry the fruit between the places occupied by the cutters and the press, consists of wood, and is constructed in the same manner as a bucket, though elongated and flattened so as to be readily carried on the back, having straps to pass over the shoulders. As above intimated, it serves also as a measure for must.

The following table, based upon one hundred and fifty experiments, represents the percentage of tartaric acid and sugar in the wines from the several localities indicated:

Locality and variety.	Acid.			Sugar.		
	Minimum.	Maximum.	Average.	Minimum.	Maximum.	Average.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Portuguese (red wines).....	0.70	1.56	1.13	12.66	17.32	15.09
White wines:						
Upper Haardt.....	0.98	2.29	1.36	8	17.01	13.17
Middle Haardt.....	0.87	1.32	1.06	14.14	20.18	17.53
Lower Haardt.....	0.84	1.35	1.04	12.72	23.32	18.78

Of the years above indicated as yielding large quantities of wine, the year 1893 is known as one of the best for perhaps a century.

The season at blooming time was warm and sunny, while at the period of growth there was just sufficient rain to aid full development of the grape. The sugar present in the must was sufficient, and the bouquet and quality of the wine most delightful. The smaller growers emptied casks of less desirable stock on hand to make room for the new vintage. At the present time, however, this same yield has become a little heavy, and not as desirable as that of 1896, on account of the percentage of sugar.

The yield of the year 1898, which is coming to a close in the Pfalz and which ended in Baden during the past week, is a poor one. The majority of growers agree in saying that the harvest will vary from 5 to 10 per cent of what it should be, and that the proportion of acid is unusually high. Under ordinary circumstances, no sugar—or at least very little—is required; but for the present yield, a large percentage will be needed to make the wine marketable. The reason of all this is because of the rainy weather when the vines began to bloom and the drought when the grapes needed moisture. The consequence was that a great quantity wilted and fell to the ground, and those remaining were in many instances affected by insects injurious to the grape.

The lack of wine will very materially affect the distilleries, the total number of which, employed in the manufacture of alcohol, brandy, etc., is 878; of these, 777 are situated in the chief customs district of Landau, in the southern Pfalz, and 103 in that of Ludwigshafen-am-Rhine, in the northern part. Besides the use of grain, potatoes, fruit, etc., in the manufacture of spirits, there were thus utilized, in 1895, 10,700 hectoliters (280,672 gallons) of material consisting of refuse from wine presses and sediment from casks.

The price of various wines has increased about 10 per cent, and it is stated that it will continue to increase in comparison with the demand.

In conclusion, a few words with reference to Palatinate and Rhenish Hessian measures in use.

Vineyards are frequently reckoned as follows: A Hessian morgen is equal to 400 klafter, or 2,400 stück or stalks (vines), yielding ordinarily 1,200 liters (316.7 gallons) of must, or new wine. Some firms invoice their sales at per stück. The Pfaelzer fuder is reckoned at 1,000 liters (264 gallons), and all large sales are based upon this quantity; the Mosel fuder is sometimes reckoned at 960 liters (253 gallons). On the Pfaelzer Rhine, the Haardt, and the Mosel, an ohm is estimated at 150 liters (39 gallons), while in Rhenish Hessen it is 160 liters (42 gallons).

WALTER J. HOFFMAN,

MANNHEIM, *November 1, 1898.*

Consul.

GERMAN REGULATIONS IN REGARD TO AMERICAN FRUIT.*

The following is a translation of a new order issued by the senate of the free and Hanseatic town of Bremen, under date of October 25, 1898:

REGULATIONS WITH RESPECT TO THE IMPORT OF LIVING PLANTS AND FRESH FRUITS FROM AMERICA.

In compliance with the imperial decree relating to the importation of living plants and fresh fruits from America made on the 5th of February, 1898, the senate orders:

SECTION 1. The investigations to be made in accordance with the above-named imperial decree will be intrusted to special experts, whose names will be made public.

SEC. 2. The fees payable to such experts for undertaking such investigations shall be 4 marks (95.2 cents) for the first hour or part of an hour, and for every further hour or part of an hour 2 marks (47.6 cents), up to a maximum sum of 12 marks (\$2.856). Where, with less bulky parcels, the examination occupies less than an hour, then 1 mark (23.8 cents) shall be payable for every quarter of an hour or part thereof so engaged; but the minimum fee shall be 2 marks (47.6 cents).

SEC. 3. The shipper of the articles to be examined must accompany the parcel with a declaration whereunder he (a) binds himself to discharge the costs of such investigation; and (b) empowers the consignee of such parcel, or some other duly authorized person residing within the limits of the state, to discharge such costs. Should such declaration not be forthcoming, the party entitled to take delivery of the parcel shall be informed thereof by the administration of the port of entry; with the notification that the parcel can only be handed over after payment of the cost of examining the same. Should the so-required declaration not be handed in within the specified delay, then the parcel will be returned to its source of origin at the expense of the party liable for the same; and the party so liable will be deemed to be he who is naturally (nominally) in possession thereof, or, can such return not be effected for any cause, then such parcel shall be destroyed by fire, at the order to that effect being given by the administration competent in the matter.

SEC. 4. The experts have to hand in their account simultaneously with their report to the administration which has directed such investigation, and such administration has then to collect such fees from the party liable for the same.

These regulations were made at the sitting of the senate in Bremen on the 21st, and made public on the 25th day of October, 1898.

LOUIS LANGE, Jr.,
Consul.

BREMEN, *November 3, 1898.*

* See CONSULAR REPORTS No. 210 (March, 1898), p. 377, and No. 214 (July, 1898) p. 390.

GERMAN COMMERCIAL INTERESTS IN THE EAST.

The trip of Prince Henry of Prussia from Vladivostock through the Usuri country to Khabarovsk may have some commercial significance. The country is as uninteresting as any on earth, and would not appear to have attractions for a prince of Prussia.

But Germany is interested in commerce. The Kaiser said, some days ago, in Stettin, that Germany's future lies on the water. Important railroads were built recently, opening up the Usuri country; ice breakers keep Vladivostock Harbor open to navigation all winter. Germany, taking advantage of both facts, has begun to furnish those far-away parts with all kinds of articles formerly furnished by Belgium and France. Rivalry exists in eastern Siberia between the nations named. What the end will be, no one who knows what German enterprise has already accomplished can doubt. Hamburg has a German Siberian trading and shipping company, whose purpose is to aid in establishing regular trade between this Empire and the Amur country. Khabarovsk, the last station on the line from Vladivostock through the Usuri country, is most favorably situated at the confluence of the Amur and Usuri rivers. The Hamburg people have made it the headquarters for all their operations in the Usuri and Amur regions. Under this central office are active agencies, all over the sections of Siberia opened up by the new road. These are supplied with samples and stocks of German manufactures suited to the wants of the Amur and Usuri people. Some of these are sold; many, however, are exchanged for the river, forest, and farm products of eastern Siberia. The vast regions through which the Usuri and Amur roll, the latter navigable many miles for fairly large steamers, offer opportunities for trade which are bound to increase. Russian steamship companies now carry goods up and down the Amur, from Nikalojewsk to territory beyond the provinces of Transbaikal. A glance at the map will show how important all this may be in the great struggle going on now in the East.

There is every reason to believe that this trip, which is taking the prince far beyond the operating sphere of a naval commander, has for its object the extension of German commerce into the districts of the Amur and Usuri rivers. It is worth mentioning, too, that Germany ranks first among the states trading with these districts. There are eighty-two German ships, aggregating 49,000 tons, heading the list of those plying between Vladivostock and Hongkong, Shanghai,

and Nagasaki. The sudden rise of Vladivostock, after the rates for travel and freight were reduced on the Usuri Railroad, is due, to a great extent, to the enterprise of German shipowners. The growing commercial interests of the Germans in that province are sure to predominate as industry develops. Most of the men who are making markets in Russia for German manufactures are masters of the Russian language. Agencies under German directors are at work in Moscow, St. Petersburg, Odessa, Nizhni Novgorod, Vladivostock, and Khabarovsk.

It is possible for United States manufacturers, if the right kind of effort is made, to get a good deal of Russia's trade. Her needs are similar to our own, or to what ours were fifty years ago. There never was a time so important to our people. If we are wise, we will watch the methods of others.

Hardly has Prince Henry pushed his way into parts hitherto almost unknown to western people before the Kaiser's pilgrimage takes on an industrial significance. A writer in one of the Empire's leading textile organs says:

The trip of the Emperor to the Orient has, at all events, an industrial importance. The East is much more affected by outward show than is any other people. In order to believe in Germany's power, one wants to see with one's own eyes an exhibition of that power. As the building of the Anatolian Railroad opened up territory for us which England and France formerly supplied, so must the Emperor's trip have influences far beyond Palestine's borders. Eastern people will get a good idea of this Empire's capacity to produce and supply. The Kaiser certainly did not select such reasons for his trip; but inasmuch as he sent his brother to find new ways and roads along which the nation's commerce can be carried, and places in which it can be profitably sold or exchanged, so will his own trip have far-reaching industrial effects, and by no means least of all for the textile trades. Little or nothing will be gained or done, however, unless great efforts are made. Herein German shipping has a great part to play. It is now known that there are a great many harbors—Akka, Alexandria, Beirut, Yafa, Haifa, Canea, Lamago, Limaspol, Mersine, Saida, Tunis, Soelo, etc.—which German ships never touch. In the last year, 245 British, 155 French, and 115 Austrian ships entered at Beirut. In the harbors of Tunis, 136 British, 1,298 French, 799 Italian, and only 3 German ships entered during 1897. The Empire's exports to countries on the coasts of the Mediterranean were not large. Turkey, including Asia Minor and Tripoli, and Egypt, Tunis, Algiers, and Morocco took wares worth no more than \$10,000,000. Of these, Turkey alone took nearly \$7,500,000 and Egypt \$2,200,000. In 1893, the exports thither were \$12,500,000. This indicates a 20 per cent decrease. Oriental markets are among the world's very best for textiles. Hence the hope that the Kaiser's visit will be followed, as it doubtless will be, by better results than those hitherto chronicled.

J. C. MONAGHAN,

CHEMNITZ, *October 23. 1898.*

Consul.

PLATINUM INDUSTRY IN RUSSIA.

The following article has been translated from the *Novoe Vremia*:

The Urals have been until now the only source from which platinum has been procured for the international market. Its part formed over 95 per cent in the universal production of that precious metal. A small group of platinum mines, concentrated in the Verkhoturksk district of the government of Perm, includes about seventy separate mines, of which only forty are being worked, and the remaining thirty are either inactive or under investigation. During 1897, the production of platinum amounted to about 6 tons, of which separate enterprises produced the following amounts: Mines of Count P. P. Shuvaloff, 1 ton 396 pounds; mines of Count Demidov San Donato, 1 ton 144 pounds; mines of J. Burdakoff & Sons, 1,512 pounds; mines of Kolly, 1,404 pounds; mines of Andreieff heirs, 1,188 pounds; mines of Koenigsberger, 1,008 pounds; mines of P. A. Konukhoff, 792 pounds; mines of nineteen small proprietors, 1,620 pounds.

Two of the above-named mines passed, in 1897, into the hands of foreigners. In the beginning of September, other enterprises were sold to a syndicate from Paris, with a capital of several million francs. The price was fixed according to the productiveness of the mines, estimating a ton of platinum from \$798,250 to \$957,900; thus, for example, a mine having a yearly output of 360 pounds was estimated at from \$128,750 to \$154,500; a mine with a yearly output of 625 pounds was sold at from \$309,000 to \$386,250.

From the above, it is seen that there are only seven great platinum enterprises in the Urals, of which five have been purchased by foreigners. By the sale of these mines Russia has lost the advantages which she could acquire from platinum industry. While platinum mines were in the hands of Russians, the whole of the raw metal was sent abroad, and the income from the manufacture of platinum articles was in the hands of foreigners. During later years the Russian platinum owners tried to get rid of the foreign purchasers, but the mines have now passed into the hands of foreigners. When one considers that no new veins of platinum have been discovered during late years, that those now existing will soon be exhausted, and that no other platinum mines have been found in the Urals, one must come to the conclusion that the Russians have lost an important industry, and the only one which enjoyed a monopoly of the world's supply.

W. R. HOLLOWAY,
Consul-General.

ST. PETERSBURG, *October 20, 1898.*

POULTRY EXHIBITION IN RUSSIA.

The Department has received a note from the Russian ambassador, dated Hot Springs, Va., October 31, 1898, inviting this Government to take part in the poultry exhibition to be held at St. Petersburg in May, 1899. Special railroad rates will be granted exhibitors. Copies of the regulations were inclosed in the note, and

have been filed for reference in the Bureau of Foreign Commerce. The exhibition will comprise the following sections:

- (1) Domestic birds—(a) hens, (b) turkeys, (c) ducks, (d) geese.
- (2) Domesticated wild birds, as pheasants, guinea hens, peafowl, swans, ostriches, quails, partridges, wood hens, black cocks, heath cocks, etc.
- (3) Pigeons—(a) post pigeons, (b) runners, (c) fancy pigeons.
- (4) Singing and exotical birds.
- (5) Fattened poultry and killed fowl and game.
- (6) Products of poultry keeping—eggs, feathers, down, preserves, etc.
- (7) Apparatus and accommodations for guarding, feeding, fattening, breeding, and transporting of birds; for the extermination of animals injurious to bird keeping; model of poultry yards, cages, volières, water and food trays, baskets and cases for the transportation of birds and eggs, bird-hatching apparatus (incubators), fattening apparatus, bone cutters, etc.
- (8) Medical, hygienic, antiseptic, and feeding articles.
- (9) Works of science and art—ornithologic literature, drawings, photos, maps, tables of statistics, collections of nests and eggs, stuffed birds, skeletons, anomalies of birds, eggs, etc.

Exhibitors are requested to send their declarations to the committee of organization of the international poultry exhibition up to the 1-13 March, 1899, addressing: St. Petersburg, Fontanka 10, Imperial Agricultural Museum.

RICE CULTIVATION IN RUSSIA.

While rice has long been raised in Persia and the Transcaucasus, it was almost unknown in the interior of Russia up to 1886, the supply being imported from India and subjected to a high duty, which confined its use to the wealthier classes.

The Russians commenced its cultivation in the early eighties, and in 1888 the first rice-cleaning steam factory was opened in Baku, producing 100,000 poods (1,612 tons) the first year.

There has been a steady increase in the production, and there are now five rice-cleaning steam factories in operation, with an annual production of 3,000,000 poods (48,387 tons). An additional factory is now in course of construction, which will be supplied with the most improved machinery.

The demand for rice is increasing, and it is now generally used by the peasants throughout the Empire, the quality of the native product being equal to that of the imported article. The residues

are utilized, the broken grain being made into starch, while the flour is fed to hogs.

The finished product is packed and sold in jute bags, the four grades being marked, viz: "Reshta," having a small round grain; "Alalau," large round grain; "Campa," a thin and short grain; and "Sedra," a long and thin grain, which is considered the best. The price of cleaned rice fluctuates from 1.75 to 1.95 rubles per pood (90 cents to \$1 per 36 pounds). The flour bran sells at 30 copecks (15 cents) per pood.

In the Caucasus, the Transbaikal, and Turkestan regions, rice is sown in the same way as wheat. The producers ship uncleaned rice to the ports of the Caspian Sea, where it is sold to middlemen and commission agents. The prices are controlled by the supply and demand. At present, rice is sold at Baku from 1.30 to 1.50 rubles per pood (65 to 75 cents per 36 pounds). The principal manufacturers of rice have representatives and depots at all the larger markets. During latter years, the annual export of rice from Baku amounted to 3,000,000 poods (48,387 tons), being valued at 4,500,000 rubles (\$2,300,000). The principal routes by which rice is transported are: The Caucasian Railroad, via Poti and Batum, to Odessa and the Crimea, about 1,000,000 poods (16,128 tons); by sea, during navigation, over the River Volga, via Astrakhan, 1,600,000 poods (25,806 tons); and via Petrovsk to central Russia, about 300,000 poods (4,839 tons). The principal consuming markets are Warsaw, Lodz, the Vistula region, St. Petersburg, Riga, Moscow, Kief, Kharkof; and on the Volga Astrakhan, Nizhni Novgorod, Saratov, Tsaritsine, and Samara.

W. R. HOLLOWAY,

ST. PETERSBURG, *October 28, 1898.*

Consul-General.

NEW ICE-BREAKING STEAMER FOR RUSSIA.

Consul Metcalf sends from Newcastle-on-Tyne, October 31, 1898, a clipping from the Newcastle Daily Chronicle, of even date, as follows:

LAUNCH OF A HUGE ICE BREAKER—RUSSIAN ENTERPRISE.

The launch of a large ice-breaking steamer took place on Saturday at the Walker Shipbuilding Yard of Messrs. Sir W. G. Armstrong, Whitworth & Co. The vessel is the pioneer ship of what may be termed pelagic ice breakers, and as such will no doubt excite a great deal of interest, especially among shipowners, merchants, and others, the sphere of whose industry lies wholly or partly among waters which are at present rendered impassable by ice in winter. The employment of large ice breakers had been confined to the great lakes of Canada until the direction of the Siberian Railroad ordered a powerful vessel of this class, which

is now being erected on the shores of Lake Baikal, in Siberia. It has, however, been left for Admiral Makaroff to draw the attention of the Russian Government to the experience gained in these inland seas, and to induce him to place an order for an ocean-going vessel larger, heavier, and more powerful than any ice breaker that has yet been built. The work which she is to undertake is much more ambitious than anything that has hitherto been considered practicable, and, although it is impossible to predict whether the utmost expectation of the most sanguine adherents to the scheme will be fulfilled, there can be no doubt that the performance of the vessel will throw into the shade anything that has been done by ice-breaking steamers on this side of the world, and will also surpass the best work of the most powerful American ice breakers. In saying this, there is no intention of belittling the excellent work that has been done by existing ice breakers, which have been designed and built to meet conditions somewhat different from those which have guided the designers of the new vessel. It is held by many men of experience in navigation amid frozen waters that there will be no great difficulty in keeping open many, if not all, of the principal trade routes of the world which are at present rendered impassable every winter. The ice-breaking ferry steamers of the Canadian lakes succeed in maintaining practically unbroken connection between their stations through ice 4 feet in thickness, and they are often called upon to face what are actually known as windrows, when the drift ice has been piled up by the effect of the wind to a height of sometimes 20 feet. The greatest thickness of field ice reported by Dr. Nansen is 12 feet, and this was in latitudes where even commercial enterprise has not yet made for itself an outlet, and within the limits to which trade has hitherto been confined no such thickness of ice is to be found.

The dimensions and appearance of the vessel would suggest a battle ship, were it not that the bow is cut away and forms an exceedingly long overhang, which serves the double purpose of breaking the ice with which it comes in contact by concentrating the "vis viva" of the vessel, and of protecting the forward propeller. The earlier ice breakers were designed on the principle of breaking down the ice by what is not unfair to call brute force—that is to say, that the cutaway bow enables the vessel to be run partially up onto the ice, and if the weight thus applied was sufficient to break the ice well and good; if not, the icebreaker went astern until she came off (which, by the way, was not always successfully carried out) and tried again. The principle upon which the new vessel attacks the ice is also brute force, but is augmented by science. The forward propeller, by disturbing the water under the ice, deprives it of its support and then renders it a comparatively easy task for the heavy vessel to break through it.

Turning to the particulars of the vessel herself, the principal dimensions are: Length, 305 feet; breadth, 71 feet; and depth, 42 feet 6 inches. When fully loaded, the draft will be 25 feet and the corresponding displacement about 8,000 tons. The propelling machinery has been divided into four sets, of which three sets are aft, each driving its own propeller, and one set forward. The combined power of these four sets of machinery will be 10,000 horses. There is accommodation for thirty first-class passengers, ten second-class, and fifty third-class passengers, besides that for the captain, officers, engineers, and crew of the vessel. There is ample capacity for cargo; so that the vessel, in addition to convoying merchant vessels through the ice, is herself capable of carrying a heavy cargo. The stern of the ice breaker is cut to form a recess, into which the stern of another vessel can be securely lashed and thus obtain the utmost protection from her powerful consort. Admiral Makaroff has also in view the possibility of augmenting the ice-breaking capabilities of this vessel by having the assistance of a second vessel pushing her, as to which he has already made experiments. The convoying of merchant steamers is, of course, the primary object of the ice-breaking steamer, and it is confidently expected that

in a very short time the principal trade routes which depend on Baltic ports will be kept open in winter, and thus provide continuous employment to an enormous section of the community. The ice breaker has so far been considered a powerful commercial influence, but it is impossible for a thoughtful person to consider the field which opens itself before so powerful a vessel without seeing at once what a world-wide influence must be exercised on naval strategy, by the practical demolition of the natural winter defenses of many important places.

The building of the vessel has presented many difficult problems. The hull is divided into no less than forty-eight compartments, each one of which is absolutely water tight. Water-tight bulkheads are, of course, commonly talked of, but no water-tight bulkheads have been subjected to such severe tests as those in this vessel. Every compartment has been filled with water and put under a pressure due to a column of water extending to the upper deck. In the case of the large compartments, such as the engine and boiler rooms, this represented a very serious operation, as the capacity of each boiler room is nearly 2,000 tons.

The launching ceremony was witnessed by an immense crowd of spectators, including inspectors representing the Governments of China, Japan, Chile, Portugal, and the United States of America. The boat was christened the *Ermack*.

DIRECT STEAMSHIP COMMUNICATION WITH RUSSIA.

Ambassador Hitchcock sends from St. Petersburg, under date of October 10, 1898, copy of a letter from Consul Bornholdt, of Riga, which reads, in part, as follows:

I take pleasure in informing you that I have made arrangements with the United Steamship Company, of Copenhagen,* which possesses a large fleet of steamers, to establish a line direct between Russia and the United States. The boats will make the experiment of running between St. Petersburg, Riga, and New York. The advantage to the importers in the United States of this direct line, which has not hitherto existed, will be in cheaper freights and avoidance of transshipment. It is hoped that there will be sufficient goods to make the trial successful and induce the company to continue the line. I am sure it will increase the trade between the two countries.

Mr. Hitchcock adds:

Since the permanency of the arrangement will depend on the volume of tonnage furnished by shippers, and in view of the great importance of thus maintaining direct communication between the United States and Russia, I would suggest that the inauguration of the new enterprise be given such publicity as will secure for its promoters a paying compensation for the risk they thus assume, in affording our merchants and manufacturers a favorable opportunity of increasing their trade with Russia.

A previous report (dated March 1, 1898) from Mr. Hitchcock says

* For a report in regard to this company, see CONSULAR REPORTS No. 213 (June, 1898), p. 236.

that the United Steamship Company has been in existence some thirty years, has a capital of about \$12,000,000, and owns over one hundred and twenty steamers trading between various European ports. It is estimated, he adds, that Russia alone consumes 1,000,000 bales of cotton annually, of which a comparatively small proportion comes direct from America; but this proportion could be immensely increased by avoiding the delay and expense of transshipment at Liverpool, Hamburg, or Bremen. The same is true in respect to the products of American manufactories, for which there is an increasing demand from Russia.

The Department has also received a communication from Consul-General Holloway, of St. Petersburg, dated October 10, 1898, covering the same information. Mr. Holloway adds that the United Steamship Company has now a bimonthly line to Newport News and New Orleans, the success of which has led its managers to consider the establishment of direct service to New York.

NEW PACIFIC STEAMSHIP LINES.

A contributor to a Russian magazine has published an article setting forth the necessity of organizing a Russian steamship line on the Pacific Ocean, in order to establish communication between Siberia and the United States, to connect with the Siberian Railroad. The same author goes on to say:

Foreigners have already established three new steamship lines, having Vladivostock as a terminal point. One of these—the American-Japanese—has for its western terminus San Diego, the most southern port of California, and will work in connection with the Atchison, Topeka, and Santa Fe Railroad. The steamers will also call at Honolulu. The second, the English-Canadian, will work in connection with the Canadian Pacific Railroad Company, and sail from the cities of Vancouver and Victoria; two of its large steamers, about 5,000 tons each, will run regularly from these cities to Hakodadi and Vladivostock. This line is controlled by the Canadian Railroad and the Empress Line. The reason for its establishment is said to be the rapid development of the Russian Pacific coast and the Siberian Railroad, and the demand for American products—among others, wheat flour, timber, and materials for railroads and factories. The third line belongs to the North German Lloyd of the Bremen Steamship Company. It has not yet selected its terminus; its directors are hesitating between San Francisco and Los Angeles.

The longer Russia remains inactive in this direction, the smaller are her prospects of occupying the place which is due her in the transcontinental and oceanic traffic. This inactivity will greatly influence the future well-being of the great Siberian Railroad.

Passengers and mails can reach Vladivostock via the Vancouver route in thirty days from St. Petersburg, while it requires thirty-five days via the trans-Siberian route, 1,151 miles of which is made in

partially closed conveyances on rough roads, traveling night and day. By the usually traveled route, the trip requires forty-five days.

The Trans-Siberian Railroad will be about 3,644 miles in length when completed; 2,015 miles are completed from St. Petersburg side and 478 miles from the Pacific coast or Vladivostock end, leaving 1,151 miles yet to be built. The construction is going on at the rate of 331 miles per year.

ST. PETERSBURG, *November 1, 1898.*

W. R. HOLLOWAY,
Consul-General.

STEAMSHIP LINES AT ADEN.

In reply to inquiries by the National Association of Manufacturers (to whom the original letter was forwarded), Consul Cunningham writes from Aden, September 27, 1898:

I send herewith a list of the steamship lines which touch at this port. This does not, of course, include tramp steamers. The irregularity of arrival of the boats bound for New York reduces the amount of cargo they would otherwise receive. Most of the goods sent from here go by German or British Indian lines, and transship at Naples, Genoa, and London.

As is known, Aden is the collecting point for exports from Somaliland and part of Abyssinia, and the distributing points for such articles as are imported. Goods are transshipped here by coast steamers to Zeila and Berbera and thence carried 200 and 300 miles into the interior of Africa by camel caravans. The freight rates charged by coast steamers on cotton goods and petroleum (the only imports of consequence from the United States) from here to Hodeida (Arabia), Zeila, Bulhar, or Berbera (Africa) are about 7s. (\$1.705) per ton of 2,240 pounds. Other goods are shipped to the coast at about the same rate. The freight on articles from Aden to New York is: Skins and hides, 70 rupees (about \$22.40) per ton of 2,240 pounds; coffee, 40 rupees (about \$12.80) per ton.*

* Rupee reductions made by the consul.

Steamship lines at Aden.

Name of line of steamships.	Home address.	Terminal ports.	Trips.	Nationality.	Local agent.
Peninsular and Orient.....	London.....	London to Australia.....	Fortnightly.....	British.....	Peninsular and Orient Co.
Do.....	do.....	London to Bombay.....	do.....	do.....	Do.
Do.....	do.....	Aden to Bombay.....	do.....	do.....	Do.
North German Lloyd.....	do.....	Bremen to Australia.....	do.....	German.....	S. Smuck.
German East African.....	Hamburg.....	Hamburg to Durban.....	do.....	do.....	Aden Coal Co.
American and Indian.....	Bucknall Bros., London.....	New York to Calcutta.....	Monthly.....	British.....	Do.
British India.....	23 Great Winchester street, London.....	London to Calcutta.....	Twice a month.....	do.....	Cowells & Dushaw Bros.
Do.....	do.....	London to Zanzibar.....	Monthly.....	do.....	
Austrian Lloyd.....	Trieste.....	Trieste to Bombay.....	do.....	Austrian.....	
Do.....	do.....	Trieste to Kolu.....	do.....	do.....	
Bombay and Persia.....	Bombay.....	Bombay to Jeddah.....	do.....	British.....	
Anglo-Arabian Co.....	London.....	London to Persian Gulf.....	do.....	do.....	
Owasjee Coast Line Steamship.....	Aden.....	Aden to Zaila Berbera, Bulha, and Hodeida.....	Every 5 days.....	do.....	
Messrs. Barber & Co.'s steamship.....	New York.....	New York to Japan.....	Irregular.....	do.....	
Wilson's Line steamers.....	Hull.....	Hull to Bombay and Kurrachee.....	Monthly.....	do.....	Luke Thomas & Co.
Hamburg-American Line.....	Hamburg.....	Antwerp and Hamburg to East.....	do.....	German.....	Do.
James Woorack & Co.....	Constitution street, Leith.....	London and New York to East.....	Irregular.....	British.....	Do.
Alfred Holt Line.....	Water street, Liverpool.....	Liverpool to China.....	Weekly.....	do.....	Do.

STOVES AND METHODS OF HEATING IN KOREA.

In reply to numerous inquiries from manufacturers of stoves in the United States as to the prospects of extending their business to Korea, I wish to make answer in this general manner.

Stoves are not used to any extent by the native Koreans. The Korean method of heating is most excellently adapted to their resources and conditions. In building their houses, they lay down a system of flues where the floor is to be. These flues begin at a fireplace, which is usually placed in an outer shed or connecting closed alleyway. From this fireplace, the flues extend in a more or less curved direction, like the ribs of a round fan, to a trench at the rear of the room, which in turn opens into a chimney, which is usually placed some distance from the house. Flat flagstones are then placed carefully over these flues, and the whole is cemented over and finally covered with the thick oil paper for which the country is noted. This paper keeps smoke from entering the room, and a little straw or brushwood, used in the fireplace for cooking the rice, serves to heat the stone floor and gives an agreeable warmth which lasts till the time of the next meal. Two heatings daily serve to give the people a nice warm floor, upon which they sit in the daytime and sleep at night. By leaving their shoes at the door, the inmates preserve the paper floor, which from constant polishing takes on a rich brown color.

Among the poor, these rooms are little cubes of 8 feet, but in more pretentious houses there will be a suite of four of these rooms opening into each other by sliding doors and capable of being thrown into one large room. A suite of these rooms on either side opens upon a large room with a board floor, which is 18 by 18 feet or larger, and unheated. This is used for summer and at all times as an outer hall or reception room. These houses are built around an open court, upon which, at the back, opens this large reception room. A better system of heating or one more economical would be difficult to devise for a country where the winters are so severe as in Korea and where fuel is so scarce and expensive.

Korea has little timber, but excellent deposits of bituminous and anthracite coal, especially the latter. So far, all requests for concessions to mine these coal deposits have been positively refused by the Korean Government. Natives dig out the surface coal in the crudest and most expensive manner, allowing the débris and water from the heavy rains to fill up the shaft or hole and damage the coal to be gotten out the following year. The result is that the coal

finally offered for sale is so rotten from exposure to wet and cold that after it has been frequently handled and packed on pony back, it arrives in Seoul mostly in the condition of fine dust, which has to be mixed with wet, red clay and made into balls by hand. These balls when dry are used by the foreigners in their stoves. This poor stuff is exceedingly expensive, costing this year 18 yen (\$9) per ton, from which must be taken the included weight of some fourteen or sixteen heavy straw bags, in which the coal arrives.

The few hundred foreigners in Korea (Americans and Europeans) use stoves, as the paper floors do not answer for foreign use, owing to the fact that our rooms are too large and our shoes and furniture soon ruin the floors. Stoves from Germany at one time were quite in favor, but the stoves most commonly used now are made at Dowagiac, Mich., which I found to be so successful here that Messrs. Townsend & Co. took the agency for them; and they are now very generally used. Even a few Koreans have begun to employ them. They leave much to be desired in the matter of packing, however, as few arrive that are not more or less damaged by being poorly packed.

Owing to the high price of coal, numbers of kerosene stoves are now being used, and these seem to appeal to the Koreans, as they are neat and handy and furnish light as well as heat.

There can never, however, be a large trade in heating stoves in Korea, so long as the people adhere to their present style of houses.

HORACE N. ALLEN,

Consul-General.

SEOUL, *October 15, 1898.*

BRITISH TERRITORY IN CHINA.

Mr. White, secretary of the embassy at London, sends, under date of October 29, 1898, copy of the treaty between England and China respecting Wei Hai Wei, as follows:

CONVENTION BETWEEN THE UNITED KINGDOM AND CHINA RESPECTING WEI HAI WEI.

[Signed at Peking, July 1, 1898; ratifications exchanged at London, October 5, 1898.]

In order to provide Great Britain with a suitable naval harbor in North China, and for the better protection of British commerce in the neighboring seas, the Government of His Majesty the Emperor of China agrees to lease to the Government of Her Majesty the Queen of Great Britain and Ireland Wei Hai Wei, in the province of Shantung, and the adjacent waters for so long a period as Port Arthur shall remain in the occupation of Russia.

The territory leased shall comprise the Island of Liu Kung, and all the islands in the Bay of Wei Hai Wei, and a belt of land 10 English miles wide along the entire coast line of the Bay of Wei Hai Wei. Within the above-mentioned territory leased Great Britain shall have sole jurisdiction.

Great Britain shall have in addition the right to erect fortifications, station troops, or take any other measures necessary for defensive purposes at any points on or near the coast of the region east of the meridian $121^{\circ} 40'$ east of Greenwich, and to acquire on equitable compensation within that territory such sites as may be necessary for water supply, communications, and hospitals. Within that zone Chinese administration will not be interfered with, but no troops other than Chinese or British shall be allowed therein.

It is also agreed that within the walled city of Wei Hai Wei Chinese officials shall continue to exercise jurisdiction, except so far as may be inconsistent with naval and military requirements for the defense of the territory leased.

It is further agreed that Chinese vessels of war, whether neutral or otherwise, shall retain the right to use the waters herein leased to Great Britain.

It is further understood that there will be no expropriation or expulsion of the inhabitants of the territory herein specified, and that if land is required for fortifications, public offices, or any official or public purpose, it shall be bought at a fair price.

This convention shall come into force on signature. It shall be ratified by the sovereigns of the two countries, and the ratifications shall be exchanged in London as soon as possible.

In witness whereof the undersigned, duly authorized thereto by their respective Governments, have signed the present agreement.

Done at Pekin in quadruplicate (four copies in English and four in Chinese), the 1st day of July, A. D. 1898, being the thirteenth day of the fifth moon of the twenty-fourth year of Kuang Hsu.

[SEAL.] CLAUDE M. MACDONALD.

[SEAL.] (Seal of the Chinese Plenipotentiary.)

PETROLEUM IN THE DUTCH EAST INDIES.

I inclose translations of a telegram and an editorial clipped from a Batavia paper of the 21st instant. For some time, rumors have been afloat that the Sumatra oil companies were not as easy in their minds as they had been, and that the wells were running dry more quickly than new ones could be bored. No one seems to know exactly how much truth there is in all this, and many believe that it is merely a movement of insiders on the Amsterdam Stock Exchange to depress the stocks of these companies, with a view of buying in more and thereby tightening their control. If that be their object, it has certainly succeeded; for, whereas the shares of the Royal Company (Koninklijke Maatschappij) were at one time as high as 1,040 per cent premium, they are now very little over 200 per cent premium, and there is every prospect of a further decline.

Where there is so much smoke, however, there is bound to be some fire, and there is no doubt that many of the wells are running dry at an alarming rate. This in itself would not be so very important, as there is much new territory, practically half Sumatra, which has not been worked, and which gives every indication of being good oil country; but the trouble is that the Dutch have

neither capital nor men enough to go ahead, and they will not permit foreigners to help them out, as I have shown in my report of March 18, 1898,* and as can be seen by the inclosed clipping.

American oil experts are not permitted by the Dutch laws to work in the new Tamiang concession, although it is freely admitted that there are not enough Dutch experts competent to do the work. The alleged reason is that Tamiang being a so-called dangerous district, the Dutch are afraid that if any foreigners should get killed by rebels there, their respective governments would make troublesome reclamations.

This, however, does not explain their hostility to foreign capital, which is absolutely necessary if the Dutch are to do anything with Sumatra, Borneo, and New Guinea.

Last year, on a capital of 8,000,000 guilders (\$3,200,000), the directors of the Royal Company paid a dividend of 56 per cent, which was practically all the cash they had in the treasury at the time; and that, too, in spite of the fact that they knew their wells were running dry, and should have kept back every cent they had for the purpose of opening up new wells and more territory. Desperate as the situation will soon become, the Dutch Government will not permit either foreigners or foreign capital to take a hand. The same policy holds good with regard to coal and mining concessions in Borneo and the Celebes. The Dutch are neither numerous nor rich enough to develop them themselves, and will not let anyone else do it for them.

The situation, therefore, is full of encouragement for the Standard Oil Company. The Russian oil has been nearly driven out of the market, and if the wells now being worked in Sumatra run dry, and Dutch policy does not permit of new ones being opened, American oil will again have a monopoly and raise the price to a paying point.

Many shrewd observers here, including even Dutchmen, believe that Americans will get control, in some way, of the better Sumatra oil fields. I hope this may be true, for Sumatra is among the richest countries in the world and has hardly been touched.

SIDNEY B. EVERETT,

BATAVIA, *September 23, 1898.*

Consul.

[Telegram in the Bataviaasch Nieuwsblad, September 21, 1898.]

MEDAN, SUMATRA, *September 21.*

Of the condition of the territory of the Royal Company for working petroleum wells, nothing is known but rumors. The one sure fact is the decline in production, which amounted in August to 700,000 liters (184,922 gallons) less than in July.

*See CONSULAR REPORTS No. 214 (July, 1898), p. 380.

The decline in the price of the shares is to be attributed to still other causes. It is said that the drying up of the wells is one of the principal causes.*

The new concession in Tamiang, from which there are great expectations, is not being worked at present, on account of the clause in the decree for its development providing that only Dutchmen can be employed in that particular territory. The American borers in the service of the company are therefore of no use to it, and there are no others to be had.

[Editorial in the *Bataviaasch Nieuwsblad*, September 21, 1898.]

Information which we have received from Medan (Sumatra) gives light on the decline of the shares of the Royal Company for working petroleum wells. The gradual drying up of the wells has been for a long time foreseen.

The capacity of those being worked was 8,000 barrels of crude oil per day, equivalent to 570,000 units* of refined oil per month. The whole of this quantity was drawn from the original territory of the Zijlker concession.

Boekit-Mas has probably not yet given much. One well which was yielding largely, but which was temporarily closed because the product was not needed, developed when reopened only gas in considerable quantities.

In July, the whole product amounted to 382,500 units; and as in August, according to the report, much less was produced, it is no wonder that the price of the shares has fallen.

As far as we know, the administrator remains unshaken in his conviction that before very long there is a great probability that new wells will be bored.

TRADE WITH SYRIA.

Consul Ravndal, of Beirut, in his annual report (which will appear in *Commercial Relations*, 1897-98), says that although local trade with the United States is growing, outside of sewing machines the imports are not of great importance. This is not due to a lack of appreciation of the excellence of American goods, says the consul, but to the higher prices, which is chiefly the result of the cost of transportation and transshipment. With direct steamship facilities, many lines of American products would find ready sale in Syria; especially hardware, tools, pumps, corn shellers, fanning mills, cotton prints and drillings, canned provisions, furniture, watches and clocks, leather and saddlery, drugs and paints, kerosene, and flour. Cotton goods were imported into Beirut during the last fiscal year to the value of about \$4,000,000, over three-fourths of which went to England. They form the principal article of import throughout the Levant, and the question whether or not the United States can compete in this trade is important. At present, no United States manufacture of cotton reaches this market, except 60 to 70 bales annually of heavy duck or canvas, used for sails and shoe cloth. There are countless varieties of Manchester goods offered on this market; in

*Unit is equal to case of about 10 gallons.

prints alone, there are hundreds of qualities, colors, and designs. The leading cotton fabrics on the local market are unbleached, bleached, and printed calicoes, as follows:

Trade name.	Length.	Width.	Weight.	Price.
	<i>Yards.</i>	<i>Inches.</i>	<i>Pounds.</i>	
T cloth, McClure.....	24	24 to 36	4 to 8	15.9 cents per pound.
T cloth, Mexican.....	24	24 to 40	7 to 12	17.6 cents per pound.
T cloth, inferior.....	24	24 to 36	4 to 9	14.1 cents per pound.
Shirting	37½	31 to 54	7 to 15	98.9 cents to \$2.297 per piece.
Bleached calico.....	39	32 to 37	.....	\$1.413 to \$4.24 per piece.
Sheeting	50 to 60	72	.....	7 cents to 15 cents per yard.
Prints.....	30 to 45	27 to 32	.....	17 cents to 17.6 cents per yard.

FOREIGN COMMERCE AND INDUSTRIAL PROGRESS OF GERMANY.

In his annual report (to appear in full in Commercial Relations, 1897-98), Consul-General Mason, of Frankfort, says:

The year 1897 in Germany has been characterized as "another twelvemonth during which every chimney in the Fatherland was smoking, every wheel turning." The industrial and commercial activity which began so notably in 1894 was continued throughout the year, and the statistics of foreign commerce show a notable increase in both the bulk and aggregate values of imports and exports over those of the last preceding, or indeed any previous, year. The foreign trade of the five years ending with 1897 is thus synopsised, it being premised that the values here given are those supplied by the Imperial Bureau of Statistics, and are not actual, but estimated officially by taking as a basis the average market value of each class of merchandise during the year under consideration:

Year.	Imports.	Exports.	Total.
1893.....	\$983,908,660	\$772,205,756	\$1,756,114,416
1894.....	1,019,956,854	726,252,240	1,746,209,194
1895.....	1,010,574,418	814,977,450	1,825,551,868
1896.....	1,088,480,624	874,287,702	1,962,768,326
1897.....	1,150,228,058	906,335,178	2,056,563,236
Increase in 1897 over 1896.....	61,747,434	32,047,476	93,794,910

There is thus shown a net gain of more than \$93,000,000 over the aggregate foreign trade of 1896, which, in respect to both imports and exports, had surpassed the record of every previous year. The excess of imports over exports amounts to \$243,892,880, which would be considered in the United States a somewhat serious adverse "balance of trade." But it must be remembered that the relative situations of Germany and the United States in regard to

supplies of food products and certain raw materials of manufacture are essentially different. Germany, with 52,000,000 inhabitants, is unable, under present conditions, to raise either meats or breadstuffs in sufficient quantity to supply the wants of her people, and must import heavily not only food but several staple raw materials.

Speaking of the decreases in exports from Germany to the United States as a result of the United States tariff law of 1897, the consul-general says that the districts of textile manufacture—Crefeld, Barmen, Sonneberg, and Aix la Chapelle—show an aggregate loss of nearly \$4,300,000 as compared with the exports of the preceding year. He continues:

This deficit has not failed to attract immediate and serious attention in this country, and some of the more aggressive journals and economists have suggested that the present is a favorable occasion for the adoption of a retaliatory policy against the United States. This project appears to have gone so far that the Prussian chambers of commerce in the districts most concerned—that is to say, where sugar or textile products form the bulk of exports to America—have made a general inquiry "to ascertain the opinions and wishes of merchants and manufacturers in respect to the future commercial policy of the German Empire toward the United States."

The result of this inquiry, if the reports of leading newspapers can be trusted, has been overwhelmingly against the policy of a retaliatory customs war. Germany has had recent experiences in tariff wars with Russia and Spain, and the result in both cases has been discouraging; so that the average sentiment among shippers and manufacturers is that while such measures may be sometimes justifiable, they are advisable only as a last recourse, after all peaceful measures have proved ineffective.

In respect to the whole question of import duties and commercial treaties, which will play an important part in German politics during the coming two or three years, there are in this country, aside from merely political divisions, the shades of which are multifarious and incomprehensible to a foreigner, three well-defined groups, each representing the personal interests of its members. They are, respectively, the agrarians, who, if unrestrained, would abolish most of the concessions granted by the commercial treaties that were negotiated with foreign countries during the administration of Chancellor Caprivi, and, by cutting off the importation of meats and cereals, advance the local prices of animals and food products, and thus render German agriculture more profitable; secondly, the industrial group, which would lower or abolish entirely the duties and restrictions against foreign meats and breadstuffs, and, by making food as cheap as possible, facilitate low cost of production in manufactures; and, thirdly, the commercial group—merchants, bankers, and traders

of all kinds—who urge the utmost freedom of trade, large international exchanges, busy railroads, canals and inland river routes, increased subsidies to ocean steamship lines, and a general open and liberal policy in all matters of trade.

Theorists have been studying the results of the recent elections to the Reichstag and estimating the changes in Germany's foreign policy that may come as a result of the weakening or strengthening of the representatives of one or the other of these parties, but all predictions on that score are thus far contradictory and appear to be based rather on the hopes than the convictions of the writers. The fact that the agrarians have lost a few seats is, however, generally accepted as meaning that the difficulties that they have helped to make about food imports will at least not be aggravated, and the poor success which special groups of manufacturers—as, for instance, the bicycle makers—have met in obtaining new and prohibitive duties on imported products in their line would indicate that a conservative policy is more than probable in future.

GEOGRAPHICAL DISTRIBUTION OF GERMANY'S FOREIGN TRADE.

It remains to glance briefly at the origin of Germany's imports and the destination of her exports—in other words, the relative contributions of the several leading nations to the foreign commerce of the Empire. Statistics in this special branch of the general topic are unfortunately, for some reason, always greatly delayed; the Imperial Statistical Year Book for 1897, which has just appeared, contains only the geographical tables for the foreign commerce of 1896.

From these, it appears that Great Britain holds the first and the United States the third place in both the import and export trade of Germany. Of the forty-six countries named in this exhibit, the five leading ones are as follows: Great Britain contributed to the imports of Germany in 1896, 647,400,000 marks (\$154,081,200) in value, or 14.2 per cent of the whole amount; Russia came second, with 634,000,000 marks (\$150,892,000), or 13.9 per cent; the United States third, with 584,400,000 marks, or 12.8 per cent; then Austria-Hungary, with 578,000,000 marks, or 12.7 per cent; and France fifth, with 233,600,000 marks (\$55,596,800), or 5.1 per cent of the whole amount.

In respect to German exports, Great Britain took 19 per cent of the whole, valued at 715,100,000 marks (\$170,193,800); Austria came second, with 477,000,000 marks (\$113,526,000), or 12.7 per cent; the United States third, with 383,700,000 marks (\$91,320,600), or 10.2 per cent; Russia fourth, with 364,000,000 marks (\$86,632,000); and the Netherlands fifth, with 262,300,000 marks (\$62,427,400), or 7 per cent of the entire export trade of the year. Germany, therefore, imported from the United States in 1896 merchandise—largely food

products, cotton, and petroleum—valued at \$139,087,200, and exported to our country goods worth \$92,320,600; leaving a balance of \$36,766,600 from the year's transactions in favor of the United States.

THE SEARCH FOR FOREIGN MARKETS.

The most definite and important keynote in the commercial record of the past year has been the ripening of the special efforts put forward by Germany and other European nations to study and master by elaborate scientific methods the import markets of remote countries, notably the East Indies, China, Korea, and Japan. The special commission sent out by Germany in 1896, to which allusion was made in my annual report for last year, returned in the spring of 1898; and its findings, as has been already reported, have been carefully reserved for the information of German manufacturers who are specially interested. In France, a similar commission has returned recently after two years of expert work abroad, and the results of its labors have become the special heritage of the boards of trade at Marseilles, Lille, Lyons, Bordeaux, and Roubaix.

The British Government has turned its active interest in the same direction, and the report of a departmental committee, which has been at work several months upon the general subject of the collection and dissemination of commercial information, has just been rendered and a synopsis of its conclusions made public. The investigation made and the policy recommended by the British commission are, as might be readily inferred, on broader and more liberal lines than those of continental nations; but they are all alike part of the general forward movement in the science of foreign trade which is characteristic of the present time—the organized effort of manufacturing and exporting nations to understand minutely the wants of foreign customers, and to find profit in catering to them. The report of the committee is elaborate and far reaching, but its principal recommendation is the establishment at Whitehall of a commercial intelligence office "to meet the constantly increasing demand for prompt and accurate information on commercial matters and the periodical exhibition of foreign samples and patterns."

The committee further urges that—

Information should be collected from the colonies and India as to the progress and direction of trade at intervals of, say, three years, by experts to be dispatched for the purpose; that special missions should be dispatched to foreign countries as occasion requires; and that arrangements should be made for the collection and exhibition of patterns and samples. All information obtained from whatever source is to be carefully indexed and made readily available, and a reference library of an adequate character is to be established in the office.

Hitherto, there has been noticeable in Great Britain some evidence of a feeling that it is not the business of government to concern

itself with work of this kind, which belongs rather to individual enterprise and energy, and that the labors of expert commissions, being made public and accessible, would work injustice to the more enterprising exporters who have obtained similar information for themselves. The report of the present committee shows, however, that popular sentiment on this subject is changing; that the necessity of more elaborate and consummate effort under Government supervision is now recognized; and that the example set by continental nations must and will be vigorously followed by Great Britain. It need hardly be said that there is in all this a pertinent confirmation and support for the recommendation submitted by the Department of State, accompanying its estimates to the House of Representatives during the recent session of Congress, in which the point was made that the time has now come when the organization and labors of expert commissions for promoting export trade should engage the serious attention of our Government.

PRINCIPAL GERMAN IMPORTS FROM THE UNITED STATES.

It is interesting to note, year by year, the fluctuations in imports of the several classes of products which form the staple of American export trade to Germany, and which show, in the aggregate, to what extent this country is dependent upon our own for not only cereals and meats, but for some of the essential raw materials of its manufactures. The record of 1897 shows the following notable items:

Articles.	Quantity.	Value.
	<i>Metric tons.</i>	
Raw cotton.....	225,293	\$40,475,600
Raw tobacco.....	10,726	1,856,400
Hides and skins.....	6,381	4,771,400
Lumber and timber.....	186,854	3,546,200
Meats.....	27,276	5,117,000
Buckwheat.....	16,098	404,600
Barley.....	118,928	3,165,400
Oats.....	96,000	2,213,400
Corn.....	976,034	12,709,200
Wheat.....	207,261	7,544,600
Rye.....	142,997	3,308,200
Flour.....	5,738	190,400
Petroleum.....	837,659	10,234,000
Copper.....	50,420	12,114,200
Resin and turpentine.....	94,952	2,023,000
Pig iron.....	18,034	190,400
Fruits:		
Fresh.....	10,337	618,800
Dried.....	17,850	2,284,800
Cotton-seed oil.....	15,548	999,600
Oil cake.....	159,483	4,331,600
Machinery.....	8,898	1,190,000
Furniture.....	361	119,000
Bicycles.....	224	523,600
Butter.....	1,122	380,800

Among the more noticeable fluctuations in the above list may be cited the import of indian corn, which in 1896 was 553,981 tons, so that the receipts of 1897 showed an increase in one year of 422,053 tons, or 76 per cent. Wheat, on the contrary, declined from 266,875 tons in 1896 to 207,261 tons in 1897; but it is to be remarked that, notwithstanding this difference in quantity, the wheat imports of 1897 were valued at \$7,544,600, against \$8,139,600 for those of 1896, a difference of only \$595,000. The greatly increased import of corn shows, therefore, that the people of Germany are beginning to realize the economy of corn as a breadstuff. While they have not yet to any great extent accepted corn bread as a substitute for the heavy, sour, black loaf made from a mixture of rye and the lowest quality of wheat, corn meal is now used to a greater degree than hitherto for mixing with wheat and rye, and it is, moreover, in constantly increasing demand as food for cattle and horses and for distillation.

The announcement that the United States Government is preparing to open at the Paris Exposition of 1900 a kitchen for the preparation and gratuitous distribution of bread and other forms of food prepared from maize, has already awakened the apprehensions of the German agrarians, whose chemists have discovered and officially announced that, as regards richness in the elements which produce fat, heat, and strength, indian corn surpasses all other cereals. It is therefore feared that when once the laboring masses of Europe realize this, and find that by proper cooking and preparation it can also be made wholesome and delicious, the result will be another blow to the consumption of wheat and rye in favor of maize, in the production of which the United States is supreme beyond all chance of competition.

Another surprising item is the import of 204 tons of American caviar, against 221 tons of the same product from Russia, although here, as well as in other European countries, all caviar is popularly supposed to be of Russian origin and paid for accordingly. Finally, there were imported last year 5,918 American horses, valued at \$975,800.

Among the steadily growing exports from the United States to Germany is leather. Notwithstanding the rapid rate at which German tanneries are being equipped with American machinery, and the eagerness with which the more advanced tanners are learning and adopting American methods, especially relating to the chrome process, there is a large and steady export from this district to the United States of calf and goat skins, which come back as shoe and glove leather. Frankfort is the principal mart of this trade, and there are now in this city eleven firms which import and deal almost exclusively in American leather, which finds a ready sale among the shoe

and leather-goods manufacturers of Germany, Austria, and Switzerland.

The importation of fresh fruit into Germany, which amounted to 94,058 tons in 1893, rose to 105,675 tons in 1896 and 141,373 tons in 1897, the increase being due in a large measure to the importations of American apples, which, stimulated by a large crop of excellent quality, invaded the German markets by shiploads, and not only undersold the native fruit and that imported from the Tyrol and Italy, but established new standards of tenderness and flavor. The import during the season of 1897-98, notwithstanding a comparatively short crop and higher prices in the United States, showed great activity until it was practically cut off by the order of January 29 last, which was modified to some extent by the subsequent order of February 5, prohibiting the importation of fresh fruits, fruit waste, plants, and nursery products generally from the United States for the declared reason that danger to German orchards was feared on account of the San José scale, living specimens of which, as was stated, had been found on some California pears that had been received at Berlin. These restrictions have since been maintained, to the great displeasure of fruit importers and dealers, as well as the nonagrarian public, which had been greatly pleased with the excellence and cheapness of American apples. Still more dismayed have been the manufacturers of jellies and fruit confectionery in the Lower Rhine region, who had built up an important industry and were practically dependent upon fruit waste from the United States as material for jellies. On August 14, the chamber of commerce at Crefeld, at a special session, passed by a large majority a resolution protesting against the present restrictions on the importation of fruit waste, and giving reasons for their protest that ought, one would think, to prove convincing.

But it is hardly probable that this or any other protest will have any important effect in changing the policy of the German Government on this question. Switzerland has adopted similar restrictions against American fresh fruits, and this confirms, from a scientific standpoint, the contention of the German savants concerning the danger to be feared from the San José scale. The American fresh-fruit trade with Germany may therefore be expected to decline as rapidly as it developed two years ago, to be replaced, as may be hoped, by a corresponding increase in the large and steadily growing import of American dried and preserved fruits, which is really much more important. Even here, there is need of extreme care on the part of producers and exporters of such products, for the German inspection of all imported food products is keen and relentless; and every case or can of dried or preserved fruits from the United States

will have to run the gauntlet of rigorous scientific investigation. Two years ago, American dried apples and pears were condemned because they were found to contain traces of acetate of zinc, absorbed from the galvanized trays on which they had been dried. Now a new defect has been found—the presence of sulphurous acid in dried apricots from California, where, as it appears, sulphur is sometimes used as an antiseptic in the curing of apricots. The percentage of sulphur thus far detected is trifling, and it is not even shown to be deleterious; but its presence is sufficient to constitute “adulteration,” with all the unhappy consequences which such fact entails.

GENERAL PROSPERITY OF GERMAN INDUSTRIES.

Notwithstanding all complaints of increased competition abroad, the stringency of hostile tariffs, and the growing cost of living at home, the year under consideration was one of uniform prosperity and activity in all fields of German industry. The consumption of coal, which forms an accurate index to manufacturing and commercial activity, increased at the usual rate, the product of German mines being, in 1895, 30,100,000 tons; in 1896, 33,000,000 tons; and in 1897, 35,700,000 tons. Besides the domestic supply, Germany imported 6,072,028 tons of coal in 1897, against 5,476,752 tons in 1896 and 5,117,356 tons in 1895; as well as 8,111,075 tons of brown coal and 435,160 tons of coke, which helped to meet the steadily increasing demand for fuel. In the district of Dortmund, the number of men employed in coal and iron works increased from 159,915 in 1896 to 172,768 in 1897. Fifty-two of the principal iron works and collieries paid dividends averaging 10.68 per cent in 1897, against 7.59 per cent during the fiscal year 1894–95.

Other great industries, like the manufacture of coal-tar dyes and chemicals, paid dividends ranging from 18 to 28 per cent, and the electrical manufacturing companies have worked literally night and day through months of phenomenal activity. It is stated upon direct authority that the General Electrical Company, of Berlin, entered upon the present year with orders on its books amounting to 95,000,000 marks (\$22,610,000), against 65,000,000 marks (\$15,470,000) on the first day of 1897; and that the great Schücker Company, of Nuremberg, had in June, 1897, orders on hand aggregating 96,000,000 marks (\$22,848,000)—more than double those of the same date in 1896. American experts whose testimony is entitled to credence have repeatedly stated, after careful examination of the subject, that the prices obtained for electrical machinery of all kinds in Germany are nearly or quite double those which prevail in the United States; and it is both natural and gratifying that the opportunity thus offered has been utilized, at least to some extent, by

American machinists. Among the instances of this kind may be cited the electrical street-railway plant at Bamberg, in Bavaria, which has been supplied during the past year by an electrical company at Cleveland; and there appears to be an increasing import of American dynamos, motors, and electrical appliances for special purposes.

The year 1896 saw organized in Germany 182 industrial companies with 268,580,000 marks (\$63,922,040) of capital, while 1897 brought forth 254 new companies, whose aggregate capital reached 380,470,000 marks (\$90,551,860). Of these, not less than 11 were electrical companies, with total capital of 96,310,000 marks (\$22,207,780). Nearly all these investments were taken at home. The Germany of to-day has become a country wealthy enough to invest its own money wherever it can see a fair prospect of a profitable return. The increased facilities for making calcium carbide, as a material for the production of acetylene gas, have been so important that the subject has been made the theme of a special report.*

The phenomenal industrial development of Germany during the past twenty years has been the combined result of a national policy, under which the skill and enterprise of manufacturers and merchants have been directed, encouraged, and sustained by every resource of the Imperial and State governments. From the Chancellor of the Empire down to the humblest tutor in a commercial or technical school, Germany has been organized, educated, trained, and devoted to the task of becoming an industrial nation in the broadest, highest sense, and in marketing its surplus products among the nations of the earth. The ablest judgment, the profoundest learning, and the most consummate technical skill have been brought to the study and perfection of every detail in the entire system, and the result has thus far justified every effort and fulfilled all reasonable expectation.

There are, however, not wanting in this country economists who think that they recognize on the horizon the rising of a cloud of ominous portent. As an incident and condition of Germany's perfect organization and rapid industrial growth, its leading productive interests have been syndicated to an extent probably unknown in any other country. All great industries—the mining of coal, the manufacture of coke, pig iron, steel billets, machinery, seed oils, potash salts, and many other products—have been for years governed by ably organized and managed syndicates, which control production, fix prices both for the home and export trades, declare dividends, and apportion contracts. The remarkable efficiency of these syndicates, in promoting exports of manufactured products, has been

* See CONSULAR REPORTS No. 216 (September, 1898), p. 47.

largely due to the power which they exercise in maintaining the home price of any given class of merchandise at such profitable figures as to enable the same manufacturer to sell for export at whatever discount may be necessary to secure the contract. In this way, as English exporters bitterly complain, German manufacturers, secure in their organization and their protected home market, have been able to sell structural iron and steel and railway supplies in London and Liverpool, and to flood the British colonies with German-made goods at prices with which their British rivals, already in possession of the colonial markets, have found it difficult to compete.

From the reports of several chambers of commerce in western Germany, there have come recently signs of impending revolt on the part of the German public against being further compelled to pay the cost of establishing and maintaining markets abroad. It is also pointed out that one result of the system the object of which was to retain in the Fatherland by every effective means the work of manufacture, and thus give the largest and most lucrative employment to labor, has been to defeat this end by promoting the export of German raw and partially finished materials, to be worked up to completed manufactures in Belgium, France, and Switzerland. It is, in other words, asserted by the complainants that the syndicates have become too efficient, too consummate in management and potent in the control of vast resources, and that the interests of the general public are thereby made to suffer.

There is perhaps nothing new or surprising in all this, nor is it apparent that any protest or complaint will avail to change the policy of the Government, or to restrain the efforts of the syndicates to extend their foreign trade, so long as results like those garnered in 1897 can be pointed to as the fruit and vindication of the present system of protection and development.

PUBLIC WORKS IN CALLAO.

Consul Dickey sends from Callao, under date of October 10, 1898, translation of the regulations in regard to the proposed sewerage works to be constructed in that city, which are summarized as follows:

The following are required: One thousand four hundred and sixty-nine meters (4,819.7 feet) of main sewer, of concrete, of 1.10 meters (3.6 feet) interior height; 1,812 meters (5,945 feet) of the same of 1 meter (3.28 feet) interior height; 8,378 meters (27,488 feet) of smaller sewer, of 0.90 meters (2.95 feet) interior height; 10,863 meters (35,641.5 feet) of drains, with iron covers; cast-iron discharge pipe, diameter 800 millimeters (31½ inches), with stone work and foundation of concrete;

length, 30 meters (98.4 feet); 166 iron covers with corresponding frames; 160 register sinks of concrete. The cement and other materials employed are to be of the best quality or the work will be demolished. The sewers are to be laid in excavations according to certain rules, and the grades, directions, and intersections are to be under the direction of the municipality. The bidder must deposit 2 per cent of the estimated cost of the work—258,976 soles (\$112,914*)—with his proposal, as a guaranty for the performance of the work. No more than the above sum will be paid, and the contractor whose bid is accepted must deposit within five days bonds to the amount of 10,000 soles (\$4,360) in silver in the municipal treasury. The contractor must appoint a legal representative in the province, and, if he is a foreigner, he must renounce all diplomatic claims. The works shall be begun within thirty days after the signing of the contract, and finished in three years; if finished within two years, the contractor will receive a premium of 8,000 soles (\$3,488), and if within two years and six months 4,000 soles (\$1,744). Delay in the execution of the works will be fined 2,000 soles (\$872) for the first month, and 4,000 soles (\$1,744) for each ensuing month. All the materials imported for the works will be free of fiscal duties. The estimated cost of the works being 258,976 soles (\$112,914) and the time to complete them being three years, the annual value of the work will be some 86,000 soles (\$37,496). The municipality will pay 75 per cent of this amount per year, leaving the balance as a guaranty until the work is finished. Payment will be secured upon the property and income of the municipality and upon the returns of the tax on water and sewerage.

The specifications of the work, with maps, etc., are filed for reference in the Bureau of Foreign Commerce.

IMPORTS INTO HONDURAS.

In his annual report (which will be published in Commercial Relations, 1897-98), Consul Johnston, of Utila, says that the United States has the majority of the imports into Honduras. In some lines, however—for instance, thread, lace insertion, etc.—the English have all the trade. In cotton goods, some English products are sold, but they are mostly from the United States, especially in the finer grades. The heavier qualities are not sold in shirtings, but the cottons used for sails and ticking are all American. The market will use twice as much of a first-class article as of an inferior. On the Island of Utila, where the English and not the Spanish language is used, school books from the United States are in demand, and if introduced, says Mr. Johnston, would be exclusively used. In woolen goods, the English have the lead. The demand is for fine, light-weight goods, to be used for trouserings, etc. Cottons of heavy weight take the place of the thicker woollens. The finish and style of all United States products are first class. American whisky is always commended, and our beer is sold, so far as Mr. Johnston

* The Peruvian sol being valued by the United States Director of the Mint, October 1, 1898, at 43 6 cents.

has seen, to the exclusion of all other. The consul gives the following advice as to packing, etc. :

Pickles should be put in bottles attractively labeled; those sold here are put up in England. Cornstarch should be put in 2-ounce packages and 5 or 10 pounds in a box. The English product, labeled "corn flour," is chiefly sold. Oatmeal, corn meal, etc., should be in air-tight packages, as in the climate of Honduras they soon spoil and are a loss to the merchant. No candles are imported from the United States, for the reason that they melt, while those from England are put up in tin cans and keep well. There is a good trade in this line.

The great drawback to imports is the duties. The published rates are so much a pound; but there are additional charges which make the tariff about double. For instance, a party bought two and one-half kegs of nails in the United States; when the duty was paid, they cost \$11.20 gold. Another party bought \$78 worth of furniture, the duties per published rates being 26.32 pesos (the peso being worth about 43 cents); 5.04 pesos were charged for weight, plus 30 per cent, plus 20 per cent, plus \$10.50 for paper at custom-house, making the total 59.42 pesos, or \$23.76 gold.

NOTES.

New Assay Office in Ontario.—Consul Hendrick writes from Belleville, November 4, 1898:

Owing to the increasing interest in what is called the Hastings Mineral District of Ontario, the provincial bureau of mines has recently established a provincial assay office in this city. The tariff of charges for assaying and analyzing the different ores is as follows:

Ore.	One assay.	Three to five assays at one time, each.	Six or more assays at one time, each.
Gold.....	\$1.00	\$0.90	\$0.75
Silver.....	1.00	.90	.75
Gold and silver.....	1.25	1.00	.90
Copper.....	1.25	1.00	.90
Arsenic.....	1.25	1.50	.90
Gold and arsenic.....	2.25	1.80	1.25
Nickel.....	3.00	2.40	2.00
Lead.....	1.25	1.00	.90
Pan amalgamation or laboratory mill run (for free-milling gold ores).....	1.00	.90	.75
Iron ores:			
Metallic iron.....	.50	.40	.35
Silica.....	.75	.60	.45
Sulphur.....	1.00	.90	.75
Phosphorus.....	1.00	.90	.75
Titanium.....	1.50	1.20	.90

Bicycle Trade in the Province of Quebec.—Consul Ledoux, of Three Rivers, under date of November 8, 1898, has written the following letter to a western publishing company:

Cycling is very popular in this consular district and confined to no particular classes. The bicycle is increasing in popularity every year, and good sales are promised for next year. The streets of the city are nicely macadamized, and the country roads are level and smooth and run through the valley of the St. Lawrence River. Runs of from 20 to 75 miles are often made without any great fatigue.

There are no bicycle manufactories in this district, 90 per cent of those used here being of American make. The few Canadian wheels used are manufactured in Montreal or Ontario and are of the higher grades. The wheels they manufacture are strong and compare very favorably in lightness and appearance with those of

any country; but cheap, reliable wheels are the most popular, and in these the Canadian manufacturers can not compete with us.

The duty on American bicycles is 30 per cent ad valorem. The Canadian manufacturers complain that it does not give them enough protection, and an effort may soon be made to have it increased. Great Britain enjoys a tariff preference of 25 per cent, but can not compete with us.

The receiving port for this district is Three Rivers. There is a bonded warehouse here. The port charges are 1 cent per 100 pounds weight.

The principal dealers of this city and the names of the cycles in which they deal are:

Panneton Blouin—Red Bird, Crescent.

Joseph Godin Son—Columbia, Cleveland, Massey Harris.

Edmond Bellefeuille—Trinity, Snell, Varsity, Arena.

L. G. Jourdain—Columbus.

M. Lamy—Warwick.

Sévère Bureau—White.

Locusts in Argentina.—Consul Mayer writes from Buenos Ayres, under date of October 12, 1898:

The locust advices are not reassuring, as, though the extinction goes on briskly, the invasions are tremendous, and it is apprehended that they will soon be in the Province of Buenos Ayres. Entre Rios and parts of Santa Fé and Cordoba are overrun. In the first three days of October, 398 tons of locusts were gathered in Entre Rios alone; but the subcommissions complain that in some quarters the inhabitants refuse to work at the extinction, and that the police does not lend its authority to compel them. The central commission has issued a circular urging that prompt notice be given of all desoves (egg depositing) and samples sent in, with dates and all other particulars pertinent. The news from Paraguay is that the locusts are thick there and doing wholesale damage. In the colonies south of Santa Fé, there have been no invasions as yet, and the farmers are of opinion that if they escape until the 15th instant both wheat and linseed will be safe. The Jewish colonies in Villaguay have been invaded and the crops destroyed. The colonization company owns 70,000 hectares* there, of which from 25,000 to 30,000 are under cultivation; so that the great loss to the farmers can easily be imagined, should the crops not come on again. For this, rain is absolutely necessary. The farmers made no move whatever to cope with the plague, and the subcommission recommends the head commission to be inexorable in imposing fines. The work of extinction is being briskly pushed in other Provinces and giving good results. Buenos Ayres has not suffered yet, but the plague is coming down apace.

* 1 hectare=2.471 acres.

Venezuelan Cattle for Cuba.—Consul Ellsworth, of Puerto Cabello, under date of November 3, 1898, says:

Messrs. Miguel Nadal and Leopoldo Roca, of the banking house of Silveria & Co., Habana, Cuba, which is represented in the United States by the banking house of Mosle Brothers, Exchange Place, New York City, are shipping fine Venezuelan cattle from Puerto Cabello to ports in Cuba. During the month of October they made the following shipments: Santiago de Cuba, via steamships *Spero* and *Bratsberg*, 750 head of cattle; Manzanillo, Cuba, via steamship *Bratsberg*, 300 head of cattle; Habana, Cuba, via steamship *Bratsberg*, 533 head of cattle.

I have information that should be reliable that Messrs. Silveria & Co. purchased over 10,000 head of cattle in the States of Bermudez and Carabobo, Venezuela, all young, fat, and healthy animals.

If Cuba and Puerto Rico have a climate similar to that of Colombia and Venezuela, iced meat will give considerable trouble, if it answer at all; while live cattle, raised in a similar climate, can be killed when necessary for consumption, and will require very little care.

Protection for Vessels Wrecked in the Bahamas.—The Department has received the following note from the British embassy, dated Washington, November 24, 1898:

SIR: Under instructions from Her Majesty's Principal Secretary of State for Foreign Affairs, I have the honor to transmit to you herewith copy of a warning issued by the government of the Bahamas to the inhabitants of the outlying islands, notifying the penalties to which they will become liable by the commission of thefts from vessels in distress.

I have, etc.,

JULIAN PAUNCEFOTE.

The Hon. JOHN HAY, etc.,

[From Official Gazette of October 15, 1898.]

GOVERNMENT NOTICE.

Whereas robberies were, in December and January last, committed from certain vessels in distress by divers persons inhabiting some of the outlying islands of this government, the Secretary of State for the Colonies has directed attention to be drawn to the fact that persons committing such acts are guilty of felony, and upon conviction are liable to be kept in penal servitude for any term not exceeding fourteen years.

By command.

HESKETH BELL,
Acting Colonial Secretary.

COLONIAL SECRETARY'S OFFICE,
Nassau, October 12, 1898.

Sugar Exports from Mauritius to Canada.—Consul Campbell, writing from Port Louis, under date of September 14, 1898, in regard to the application of the Canadian preferential tariff to British colonies,* says that Mauritius has been admitted to a participation in the 25 per cent reduction on sugar exported to Canada. The consul adds that, so far as he knows, none of the sugar produced in that colony has ever been shipped to Canada, although the exports to the United States are considerable. The tariff concession has given much satisfaction to Mauritius planters, especially as sugar sent to India and South Africa is taxed.

Beet-Sugar Cultivation in Europe.—Consul Brittain writes from Nantes, October 24, 1898:

The accompanying table, recently published in one of the leading newspapers of France—*Le Temps*—shows the number of acres of sugar beets under cultivation in the European countries during the year 1898–99 and the estimated production; also the production by countries for the season of 1897–98. The total estimate of the crop for the present season will fall 375,000 tons short of the production of raw sugar for last season. Holland is the only country in which an increase is shown.

European countries producing beets for sugar.	Under cultivation, season 1898–99.	Production per acre.	Quantity of beets produced.	Percentage of sugar yielded.	Amount of sugar estimated, 1898–99.	Production of sugar in 1897–98.
	<i>Acres.</i>	<i>Pounds.</i>	<i>Tons.</i>	<i>Per cent.</i>	<i>Tons.</i>	<i>Tons.</i>
France	573,803	50,930	5,458,125	12.95	705,000	821,000
Belgium.....	121,993	58,882	1,314,180	13.75	180,000	237,000
Holland	108,236	53,194	1,057,405	13.80	145,000	125,000
Germany	1,054,229	64,223	12,388,801	13.50	1,670,000	1,847,000
Austria	750,196	43,571	6,099,201	13	795,000	820,000
Russia.....	836,851	30,818	5,913,257	12.40	730,000	735,000
Sweden.....	56,627	64,735	672,935	12	80,000	90,000
Denmark.....	31,628	65,833	382,195	12	45,000	50,000
Other countries.....	24,710	66,138	300,000	12	35,000	35,000
Total	3,558,322	47,795	33,586,102	13.06	4,385,000	4,760,000
Total in 1897–98.....	3,749,151	52,085	37,121,000	12.82	4,760,000	.....

New Beet-Sugar Refinery for Switzerland.—Consul Lieberknecht writes from Zurich, October 24, 1898:

A company with a capital stock of 800,000 francs (\$154,400) has been organized at Aarberg, Canton Berne, for the purpose of manufacturing beet sugar. A beet-sugar refinery was built several years ago at Monthey, Canton Valais, which, after running several years, had

*See CONSULAR REPORTS No. 217 (October, 1898), p. 246.

to shut down, because it was unable to compete with imported sugars from bounty-paying countries, such as Germany, France, and Austria. Attempts were made to have the duty raised on raw and refined sugars, which latter already pays 7.50 francs (\$1.45) per 100 kilograms (220 pounds); but the Federal Council and Federal Assembly declined to protect a single sugar factory to the detriment of the consumers. Perhaps the new company just started will pay better, having been organized by farmers desirous of cultivating the beets.

Russian Production of Sugar.—Consul Smith, of Moscow, writes, on September 21, 1898:

The total output of all the sugar refineries of Russia from September 1, 1897, to September 1, 1898, was about 42,000,000 poods (667,419 long tons). Out of this total, 34,500,000 poods (556,451½ long tons) were sold in Russia and the remainder exported to foreign countries. The Russian Government levies an excise tax on sugar of 1.75 rubles per pood, which is equivalent to 2½ cents per pound.

Danish Cauliflower Seed.—Mr. Blom, vice-consul at Copenhagen, writes, on November 9, 1898:

Cauliflower seed has gained importance as an article of export from Denmark in recent years, on account of the soil and climatic conditions, which are favorable to the production of the plant and seed. The species cultivated is known as the Erfurt dwarf cauliflower, called also the Copenhagen cauliflower, or sometimes the Snowball. It has been brought to great perfection in this country. The seed is sown in September and gathered a year later, the plants requiring constant attention in the meantime.

The seed is exported to Austria, Australia, France, Great Britain, Germany, Russia, South America, and the United States.

The principal exporters are: H. Batzke, Fredensborg, Denmark; J. Pedersen-Bjergaard, Rahbeksalleé, Copenhagen; Carl Frisenette, 4 Svanholmsvej, Copenhagen; A. Hansen, 23 Tagensvej, Copenhagen; Theodor Jensen & Co., 2 Vestergade, Copenhagen; L. V. Hinrichsens Enke, 23 Classensgade, Copenhagen; Petersen & Olsen Bros., Copenhagen; R. Wibollt, Nakskov, Denmark.

Forest Preservation in Bohemia.—Consul Mahin writes from Reichenberg, September 28, 1898:

Bohemia is one of the most populous countries on the globe. Its climate is relatively cool, with rather severe winters. Therefore, much fuel is used, and it is largely taken from the forests which

cover the mountain sides. Yet, after the many centuries during which these forests have furnished fuel and building material for a dense population, they retain nearly their primeval area. This is due to the forethought of the government in ordaining that as trees were cut down others should be planted to fill the vacancies. Vast stretches of dense forests cover the mountain slopes of this district. The wood is mostly pine. Trees are constantly being cut; but wherever a clearing is made, small trees are planted the next spring. What at a distance may appear to be a bare spot in the forest, on near view is seen to be covered with little trees, set out in symmetrical rows and varying in height according to the length of time since they were planted. These new trees are raised from the seed in small inclosures scattered in the mountains, and are thence transplanted. A similar custom in the United States might yet avert the serious danger threatening at least the western part of our country.

Iron-Smelting Invention in Great Britain.—The following is a copy of a newspaper clipping sent, under date of November 11, 1898, by Consul Boyle, of Liverpool, and also sent by Consul Fleming, of Edinburgh. Mr. Boyle remarks that the invention is illustrative of the general movement which is taking place in Great Britain toward the increasing use of labor-saving machinery to meet the demands of foreign—especially American—competition.

On Wednesday afternoon, there was a large gathering at Millom iron works of gentlemen connected with most of the leading iron works in England and Scotland, to view the trials of a new "pig" lifting machine which has just been patented and which, it is claimed, will effect nothing short of a revolution in the manner of casting pig iron at smelting furnaces. The new machine, which is patented by the Euhling Company, Limited, Middlesborough, is capable of converting 1,700 tons of molten metal into approved "pigs" in one day. It has been adopted by the Millom and Askam Iron Works Company, and its practical working on Wednesday was emphatically commended by the representatives of all the firms present. The machine consists of a pouring house, to which the metal is conveyed from the furnaces in ladles. There are two strings of molds that form endless conveyors. These endless chains travel 125 [?], and carry the molds slowly up an incline. In the process of traveling the pigs are cooled by a spray of water, and the molds are returned quite cool for next load. The new machine does all the lifting, loading, and breaking at a cost of a penny an hour, against 5d. an hour by manual labor.

Germany's New Canal.—Consul Monaghan writes from Chemnitz, October 1, 1898:

It may be worth while to supplement my former report* with some additional details. There are to be two main canals—one joining the Rhine with the Dortmund-Ems Canal, and one joining the

* See CONSULAR REPORTS No. 218 (November, 1898), p. 466.

Dortmund-Ems Canal with the Elbe. This combination will unite all the North German water ways, making cheap transportation possible to almost all parts of the Empire, the Rhine being navigable to Mannheim. Side canals are to run to Osnabruck, Hildesheim, Peine, Brunswick, Magdeburg, and possibly to Nienburg. The cost of the canal and branches is estimated at 162,000,000 marks (\$38,556,000). One-half of a pfennig (0.119 cent) per ton is to be paid on goods that go now by rail, under special or exceptional rates. Other goods are to pay from three-fourths to 1 pfennig (from 0.178 to 0.238 cent), these rates to be per kilometer (0.62137 mile). The importance of canalization to an industrial country need hardly be mentioned. The results here have always more than justified the expenditures. The Kaiser's recent remark that the Empire's future is on the water is an encouragement to canal building.

Opening for Ice Machinery in Nantes.—Consul Brittain, of Nantes, writes, under date of October 27, 1898:

The matter of manufacturing ice on a more extensive scale in this city is being agitated considerably. The winter seasons are too mild to depend upon a natural supply, and the artificial ice manufactured at present is made at a number of small plants and in an expensive way. Steam power is rapidly taking the place of sailing vessels engaged in fishing in the Bay of Biscay, and large additional quantities of ice will be required in preparing the fish for shipment and for preserving them while in transit to the various European markets. It has been determined by Nantes capitalists to establish a plant for the manufacture of ice on a larger scale. The company is headed by M. Edward Kerr, of 3 rue Gresset, Nantes, to whom proposals and inquiries should be addressed. This gentleman has already had some correspondence with manufacturers of ice machinery in England. He called at the consulate this week, seeking information regarding machinery made in the United States. I think the establishment of a plant is practically assured, and manufacturers of American machinery should take up the matter at once.

Demand for Plaster and Cement Machinery at Nice.—Under date of October 13, Consul Van Buren sends to a New England firm* the news that two companies are being formed at Nice for the manufacture of plaster and cement upon a large scale. He says:

I would suggest that you forward catalogues and prices of your

* To whom the original letter was transmitted.

machinery to Mr. Frederick Repossi, commission agent, 9 rue d'Amerique (Place Washington), Nice, who is making a specialty of working up an American export trade. In sending prices, you should quote the lowest possible export rate f. o. b. at seaboard; also freight to Marseilles and Genoa, and the weight, or at least the approximate weight, boxed, of all articles.

Utilization of Petroleum Residue.—The following extracts are taken from a letter from Consul Van Buren, of Nice, dated October 20, to a large petroleum firm* of the United States:

Mr. Max Bouchsein, United States consul at Barmen, has reported† the invention of a mixture known as "velna," which is manufactured from petroleum refuse, refuse of animal grease or tallow or any other fatty substance, and soda lye. The last number of the British Consular Journal considers the matter of such importance that it calls upon its consular officers to send reports on the subject.

The United States ought to successfully compete in the manufacture of this product. In this section of France, there are several coal mines of inferior quality which are at present useless, but which, with the aid of "velna," could transform their coal into briquettes possessing caloric and gas-making qualities of a high order, and replace the English coal in use here, which costs from \$6.50 to \$8.50 per ton.

American vs. Foreign Commercial Travelers.‡—Consul-General Stowe, in a communication dated Cape Town, September 24, 1898, says that English writers complain that the commercial agents sent abroad to represent firms in their country are generally young men who have worked in the office until they are run down in health and who go abroad for a change, with no knowledge of the business except that gained behind a desk. A French consul writes in the same line that French merchants are willing to accept as representatives abroad men who have failed in their own country. The English writer, who is himself a commercial traveler, adds:

United States merchants and manufacturers send out a high class of representatives—astute men, who have large and varied experience in their respective lines; men educated in the details of the business they represent; men of the age that brings wisdom and accuracy; men that earn and command the largest salaries; and men of push, energy, and vigor.

* The letter has been sent the correspondent.

† See CONSULAR REPORTS No. 207 (December, 1897), p. 538, and No. 213 (June, 1898), p. 254.

‡ This information was for a New York newspaper, to which it has been forwarded.

Trade of Samoa.—In his annual report (to appear in full in *Commercial Relations*, 1897-98), Consul-General Osborn gives the following statement of imports and exports at Apia in 1897:

The total value of the imports was \$329,630, of which nearly half (\$157,695) came from Australian colonies. The United States sent goods to the value of \$53,415; Great Britain, \$13,322; Germany, \$83,562; Fiji, \$3,757; Tonga, \$12,642; other South Sea islands, \$4,518; New Britain, \$580; and Hawaii, \$884. The exports amounted to \$239,198, of which \$125,380 went to Europe, \$54,305 to the United States, \$51,473 to Australasia, \$14,223 to Hawaii, etc. Of copra (native product), 10,691,520 pounds were exported from Samoa. The consul-general adds that a large percentage of the goods from Australia are of American origin. It is stated that all goods originating east of California are sent to the Atlantic seaboard, thence to Sydney, and from Sydney to Apia, and are delivered there cheaper than they can be obtained directly from San Francisco.

Notes from Korea.—In his annual report (to appear in *Commercial Relations*, 1897-98) Consul-General Allen, of Seoul, speaks of the growing importance of the ports opened to trade last autumn—Chenampo and Mokpo. A concession for a railroad to connect Seoul and Fusan has been granted to a syndicate of Japanese capitalists. The road will be broad gauge, and the distance is roughly estimated at 400 miles. The cost, it is said, will be some \$12,500,000, though it is thought this will have to be doubled. The concession is for fifteen years, after which the Korean Government may buy it on appraisement. Work must be completed within ten years. Mr. Allen says that he understands much of the equipment will be purchased in the United States.

Plague in Turkestan.—Under date of November 1, 1898, Consul-General Holloway writes from St. Petersburg:

The governor-general of Turkestan, in a telegram dated October 10-22, 1898, reports that an epidemic disease with a very high death rate has appeared in the village of Anzov, district of Samarkand, almost inaccessible and separated from the neighboring villages by mountains 13,000 to 14,000 feet high. The Samarkand district lies on the River Zeravshan in the Turkestan region, 2,465 miles southeast from Moscow and east of the Caspian Sea.

At a meeting held at Samarkand by the committee of public health, the physicians reported the symptoms of the disease, without any bacteriological analysis, as being very similar to the plague.

The first case occurred in the village of Marzin, near Anzov, and the number of deaths increased rapidly. The local authorities have taken measures to stop the epidemic. There are no traces of the disease in the neighborhood.

Physicians who have studied the plague in India have been sent to the infected region.

Need of Direct Communication with Turkey.—In a letter addressed to the Philadelphia Museums,* dated October 7, 1898, Mr. Dickinson, consul-general at Constantinople, says:

A direct line of steamships between New York or Philadelphia and Mediterranean and Black Sea ports, I think, lies at the threshold of the whole question of extending American trade with Turkey. There is, I believe, no other obstacle in the way; but American manufactures and products ought not have to compete with English and German goods if compelled to bear the extra charges, as well as loss by breakage, incident to transshipment at some European port. It appears from the consular invoices that the goods sent through consular offices are amply sufficient to furnish all the freight that a semimonthly line of steamers could carry on their westward trips. These, too, are shipments direct to the United States, and do not include the large shipments made to London and there sold and transhipped to America, which would be likely to go by a direct line if one were running.

Opening for Stoves in Asia Minor.—The United States consul at Erzerum, Mr. Bergholz, writes, under date of November 3, 1898, from New Rochelle, N. Y.:

I learn from Mr. Ojalvo, the interpreter to our consulate at Erzerum, that the Turkish Government, owing to the great scarcity of wood, proposes to permit the mining of coal in eastern Turkey. As wood has been for centuries the only fuel used for heating purposes—excepting, of course, dung—the use of coal should give to our manufacturers of stoves an immense market in eastern Asia Minor, where the winters are severe and so long that fires are necessary nearly eight months of the year.

I would suggest to our manufacturers of stoves that they send circulars and price lists to Mr. Vital Ojalvo, at Erzerum, who will gladly explain their contents to dealers, who have already applied to him to be put into communication with manufacturers in this country.

* The original has been forwarded to the museums.

German Interests in Guatemala.—Consul-General Beaupré sends from Guatemala, under date of October 24, 1898, the following translation of an editorial which recently appeared in *La Idea Liberal*, a newspaper of that city, under the heading "The iron collar:"

Agriculture, which is the life of Guatemala, is now in a state of alarming prostration. As we understand the situation, the majority of coffee producers are laboring under an enormous debt in favor of German houses, which can not be paid for some time.

Summing up our agricultural question, there is some foundation for the assertion that the immense agricultural zone of Guatemala will for some years be converted into a colonial territory of the German Empire, and that, should the public peace be again disturbed, we run the danger of being economically subordinated to that country.

The systematized usury of the crediting houses is aggravating the situation of our planters. But what most oppresses them are the frauds of the foreign houses charged with the sale of their coffee. The planters, having no means of proving the actual selling price, are compelled to accept the account of sales sent them. In London, where sales are made at public auction, fraud is not possible, or at least is less injurious; but in markets where there is no legal intervention, our planters remain at the mercy of the consignee.

To remedy this evil, it is necessary to authorize in a definite manner consular intervention. In no other way do we see how our planters are to be protected in these markets.

German Enterprise in Brazil.—Consul-General Seeger writes from Rio de Janeiro, October 22, 1898, that December is the best month in which to visit the State of Parana. He has received a letter, he says, from Mr. Thon, a prominent American merchant of Curityba, urging that United States manufacturers make greater efforts to capture the trade of that country. The Germans are very active. About a week ago the new German consul arrived, which will probably mean still greater energy on their part. Plans are being made by the Germans to colonize in the Iguassù region, to build railroads, to obtain concessions of land, etc. A new line of direct communication has been established between Germany and Paraguay through the steamers *Arsy* and *Kurt*.

Proposed Tariff Increase in Brazil.—Consul-General Seeger sends the following from Rio de Janeiro, under date of October 5, 1898:

There is a strong movement among the members of the Brazilian Congress now in session to materially increase the import duties. No change in any specific duty is proposed; the measure contemplated is what would be called in the United States a "horizontal

raise" of the tariff. It is to be effected through a statute ordaining that a part of the duties must be paid in gold. It is said that the finance commission of Congress, which has the matter under advisement, will, at an early day, recommend that 10 per cent of the duties should be paid in gold at par. Based on the present rate of exchange (or, which is the same, on the present market value of the paper currency, there being no Brazilian gold in the country), this would be equivalent to an increase of the tariff of 23 per cent.

Tariff Changes in Dutch Guiana.—The following has been received from Consul Moulton, dated Demerara, October 24, 1898:

I am advised by the consular agent at Paramaribo that the following changes in the tariff laws went into effect on the 12th instant: Distilled liquors, per liter (1.0567 quarts), 50 per cent alcohol, raised from 30 cents to 40 cents; opium, ganje, bhang, and other drugs of this quality, per kilogram (2.2046 pounds), raised from \$4 to \$12; cigars and cigarettes, per kilogram, raised from 80 cents to \$1.20, tobacco, leaf or rolls, raised from 24 cents to 40 cents per kilogram; tobacco, cut, raised from 30 cents to 50 cents per kilogram. Leaf tobacco comes wholly from the United States, the importations in 1897 being 58,675 kilograms (123,354 pounds).

Customs Classification in Venezuela.—Consul Plumacher sends from Maracaibo, under date of October 21, 1898, translation of a decree recently issued by the customs division, to the effect that playing cards of 53 millimeters (2.09 inches) in length and 35 millimeters (1.38 inches) in width, having on one side the name of the cigarette factory which imports them for advertising purposes, shall be classed the same as visiting and playing cards, under classification No. 5 (1.25 francs per kilogram, or 24.12 cents per 2.2046 pounds).

Another decree, transmitted under date of October 22, says that iron wire composed of two twisted strands, which is employed instead of iron hoops or rope in packing, shall be known in future as "wire hoops of twisted iron" and be classed under No. 3 of the customs tariff (25 centimes per kilogram, or 4.82 cents per 2.2046 pounds).

United States Hams in Brazil.—Consul-General Seeger, of Rio de Janeiro, in his annual report (to appear in Commercial Relations, 1897-98) says that the reason why hams are not more largely imported from the United States is that they are not properly packed

for the Rio market. He has been told that a great many of the so-called English hams sold there originated in Chicago packing houses and go by way of England, solely for the purpose of being repacked to suit the Brazilian climate.

Codfish in Puerto Rico.—Consul Hanna sends the following from San Juan, under date of November 2, 1898:

I wish to call attention to the very large fish trade of Nova Scotia and some other British North American colonies with Puerto Rico. Codfish is the principal food article imported into this group of islands. Dealers in codfish in Nova Scotia tell me that Puerto Rico is their best market for codfish. In many cases, dealers of Nova Scotia come here every year and buy the Puerto Rican molasses, paying for it in codfish. I see no reason why New England dealers in codfish should not supply this market in the future.

Imports of Domestic Animals into South Africa.—Consul-General Stowe writes from Cape Town, October 17, 1898:

The imports of domestic animals into South Africa, with the exception of the port of Lourenço Marquez, in Portuguese territory, for the six months ended June 30, 1898, were as follows: Bulls, 2; cows, 42; donkeys, 57; dogs, 8; goats, 1; horses, 1,771; mules, 570; pigs, 12; poultry, 872; oxen, 551; sheep, 2,586. Bulls, cows, pigs, and poultry were for breeding purposes. The United States furnished the largest part of the horses and mules, but only a small number of sheep, the balance coming from the United Kingdom, Argentine, and Germany. The United Kingdom furnished 720 fowls.

Rubber Goods and Glass Bottles in South Africa.—Consul-General Stowe, of Cape Town, writes on October 12, 1898, to a dealer in druggists' sundries in New York,* as follows:

The white rubber goods manufactured in the United States will soon have the trade here, for it is said that no other foreign manufacturer has as yet been able to produce a quality which will stand the climatic conditions of South Africa; so that, with proper effort on the part of the producers of the United States, the demand will soon be increased. A representative from the United States who has just been through South Africa reports an increased trade and a growing demand. Another pleasant feature is that the white glass bottles which are manufactured in the United States are superior to those of any other make, and it is a question if they can be duplicated.

* The original letter has been forwarded to the correspondent.

Hardware and Cutlery in Cape Colony.—In reply to a Connecticut firm,* Consul-General Stowe writes from Cape Town, under date of October 12, 1898:

The total imports for the year ending December 31, 1897, were valued at \$4,898,507. I can not ascertain the exact proportion of cutlery, but the percentage is a large one. Of the above value, the United Kingdom furnished \$3,846,031 and the United States \$461,436. Orders for fine cutlery have not been so numerous lately, but there is a demand for the medium grades. The English and German trade shows an increase during the months of June and July, 1898, over the corresponding months of 1897, but no such increase is shown in the imports from America. Yet I am satisfied that American-made cutlery can successfully compete, both in price and quality, with any other make.

Bicycles in South Africa.—Consul-General Stowe writes from Cape Town, October 4, 1898:

At the request of manufacturers of bicycles in the United States, I have to report that the imports of bicycles and parts of same into all parts of South Africa, with the exception of Lourenço Marquez, in Portuguese territory, for the six months ended June 30, 1898, were to the value of £121,689 (\$592,200), of which the United States furnished £16,959 (\$82,531). The United Kingdom stands first, the United States second, and Germany third in imports.

American Steam Engines Wanted in France.—Consul Jackson writes from La Rochelle, November 9, 1898:

There is an opening in this consular district for several steam engines and boilers of American make. The engines must be 35 horsepower, and the boilers must be capable of supplying these engines. The prices, including cost of transportation, etc., to this district or Tonnay-Charente, should not exceed those asked here (about \$2,000). Correspondence, with specifications and prices, should be addressed to Mr. Grenfel Stewart, 13 rue du Palais, La Rochelle, France.

Demand for Sulphate of Copper in West France.—Consul Jackson, of La Rochelle, on October 4, 1898, says that there is an opening in his district for manufactures of sulphate of copper

* The original letter has been transmitted to the firm.

English firms at present supply the demand, but information has been sought at the consulate concerning the American product. Letters should be addressed to Monsieur C. Lefort, 10 Cours des Dames, La Rochelle, France.

Electric Lamps in Brussels.—In his annual report (which will be published in *Commercial Relations*, 1897-98), Consul Roosevelt, of Brussels, says:

The employment of electricity for illuminating purposes is rapidly extending to this city. The lamps, as well as nearly all other electrical supplies here, are of German origin; Holland supplies a few and England a fair percentage of the electrical wires employed. American lamps and other electrical goods are exposed for sale on this market, and are conceded to be superior to those imported from Germany, France, and England, and with proper effort the trade in this line could be greatly increased. Especially in copper wire, insulated wire, large cables, and arc lamps, is there an excellent opening.

New Commercial Publication at Brussels.—Consul Roosevelt, of Brussels, writes, November 8, 1898:

The Belgian Minister of Foreign Affairs has recently decided upon the publication, under the management of the commercial museum* at Brussels, of a weekly journal devoted to subjects of special interest to merchants and manufacturers. This publication will contain practical information furnished by Belgian consular officers in foreign countries, extracts from special periodicals of other nations, and reports on Belgian and foreign contracts. The publication is expected to render great service to Belgian commerce and industries.

Examination in Belgium for Railroad Employees.—Under date of November 10, Consul Roosevelt, of Brussels, writes that a competitive examination was recently held in Belgium to fill one hundred positions in the railroad service. The competition was confined to volunteer soldiers in active service, exvolunteers having served for five years and favorably recommended by the War Department, and exvolunteers who, though not having served five years, had obtained the rank of a noncommissioned officer.

* See CONSULAR REPORTS No. 173 (February, 1895), p. 303.

Sales of Ivory in Antwerp.—Under date of November 4, 1898, Consul-General Lincoln writes from Antwerp:

The fourth quarterly sale of the year was held on October 31. The ivory offered and sold was as follows: Kongo hard, 68,587 pounds; Kongo soft, 9,240 pounds; Angola, 19,448 pounds; Ambrize, 7,770 pounds; Gabon, 2,244 pounds; Abyssinia, 1,018 pounds; Gold Coast, 528 pounds; Benguela and Angola, 470 pounds; total, 109,300 pounds—as compared with 165,000 pounds in 1897, 132,000 pounds in 1896, and 156,200 pounds in 1895.

The market was very active and the prices strong. There was a rise in price of from 9 to 19 cents per 2.20 pounds for the medium tusks and the scrivailles. The tusks for bangles, however, declined slightly in price. Stock on hand this day is about 176,000 pounds.

French Textile Industry and Reciprocity.—Commercial Agent Atwell writes from Roubaix, under date of October 17, 1898, that the local chamber of commerce has addressed a plea to the French Minister of Commerce in behalf of favoring the textile products of this region in a reciprocity treaty with the United States. Voluminous statistics on the subject are to be submitted to the French Government, which will be urged to do all in its power to secure for the manufacturers of Roubaix the benefits to be derived from the application of the reciprocity clause.

Discovery of Cure for Snake Bites in France.*—Consul Skinner writes from Marseilles, November 8, 1898, that Dr. Calmette, of the Pasteur Institute at Lille, has discovered an antivenomous serum, by means of which the poisoning from snake bites can always be checked and death prevented if the serum be injected within four hours after the person has been bitten. The consul adds that Dr. Calmette is a young man of distinguished ability and, in addition to his scientific discoveries, has provided means from his private resources for the creation of a costly equipment at the Pasteur Institute at Lille.

Manufacture of Pulp in New Brunswick.—The following, bearing date of October 19, 1898, has been received from Commercial Agent Beutelspacher, of Moncton:

The city of St. John is making a contract with a prominent lumber operator to supply him with water at a very low rate, on condition of

* Full text of the report has been transmitted to the Marine-Hospital Service.

his erecting a large pulp mill in connection with his establishment. Another mill, at a place called Mispéc, about 8 miles from St. John, is nearly completed. The money invested in both enterprises comes from English capitalists. A company is also being formed to manufacture pulp at Grand Falls, on the St. John River, about 220 miles from St. John.

Canada's Increased Exports to England.—Consul Brush, of Clifton, writes, under date of November 8, 1898, that Canada's intelligent efforts toward enlarging her export trade with Great Britain have resulted in large gains. For the single month of October, 1898, he says, the returns of exports to Great Britain show an increase of \$1,600,000 over the exports for the corresponding month of last year.

Recent Exports from the Philippines to America.—Consul Williams writes from Manila, under date of October 10, 1898, that during the quarter ended September 30, 1898, the value of the declared exports from that consular district to the United States were: Hemp, 4,000 bales, \$57,503.35; hats, 19,803, at 20 cents, \$3,960.60; cigars, 34 cases, \$1,329.92; grass cloth, \$156.41; total, \$62,950.27.

Metric System in Denmark.—Vice and Deputy Consul Blom sends the following from Copenhagen, October 25, 1898:

The Danish merchants have for many years complained about the Danish weights and measures in use, as they do not agree with those ruling in other countries. A bill has just been brought into the Danish Diet recommending the introduction in Denmark of the metric weights and measures system, and the consensus of opinion is that it will become a law, to take effect as soon as possible.

American Capital in Haiti.—The United States minister to Haiti, Mr. Powell, has sent the Department of State, under date of November 21, 1898, the following:

American capital is about to seek an entrance into Haiti to develop its resources. A company is being formed, under a charter of the State of New Jersey, to construct artesian wells and supply water in various localities. Another company proposes to utilize the native cabinet woods, which are susceptible of very high polish, in exportation to the United States and in the manufacture of furniture. It will operate under a charter granted by the State of New

York. Another syndicate is being organized to build a railroad to open up the northern part of the Republic. The Government is aiding these enterprises with the means it has in its power. It is, I understand, the desire of the Government to induce American capital to invest here and assist in developing the unknown resources of the country.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
G. F. Lincoln, Antwerp.....	Nov. 7, 1898	Prices of agricultural food products.	Department of Agriculture.
R. P. Skinner, Marseilles...	Nov. 8, 1898	Antivenomous serum.....	Marine-Hospital Service.
G. G. Pierie, Munich.....	Undated.	Malt used in Munich in manufacturing beer.	Department of Agriculture.
E. Schneegans, Saigon.....	Sept. 13, 1898	Rice report.....	Do.

FOREIGN REPORTS AND PUBLICATIONS.

German Commercial Interests in Turkey.—The London Times, October 28, 1898, speaking of the growth of German exports to the Levant since 1888, when the Deutsche Bank entered into financial relations with Turkey, promoting the construction of the Anatolian railways, etc., says:

But far more important than the direct participation of German capital in the financial transactions of the Deutsche Bank in Turkey were the indirect consequences to German industry and commerce of the establishment of this new banking connection with the East. The transaction of business by industrialists and merchants was facilitated, and German enterprise has not been slow to take advantage of its new opportunities. German bicycles, to take one of the most modern articles of manufacture, are rapidly superseding English and American machines in Asia Minor. According to a report of the French Chamber of Commerce in Smyrna, 15 per cent of the bicycles imported into Asia Minor are now delivered by German firms, who are said to owe the preference that is being accorded them to the fact that they make no extra charge for packing. The Berlin agricultural-implement factory of Eckert & Co. is making most persevering and successful efforts to introduce the iron plow into Anatolia. Articles of furniture manufactured from iron, tables which can be taken to pieces and are composed of tin plates, japanned zinc ware—all of them goods which had hitherto been exclusively furnished by England—have recently been exported in considerable quantities from Germany to Yafa. Of the cloth trade, 50 per cent was a few years ago in the hands of England, and the other half was in the hands of the French and the Belgians. It is now claimed that at least 20 per cent of this trade with the Levant has been secured by Germany. This success is attributed to the lower price of the German article and also to the favorable arrangements with regard to the terms of payment which German firms concede. It is admitted that the English article is in most cases better than the German. But the inhabitants of the islands of the archipelago "make no distinction between the English product and the German imitation. They only attach importance to the appearance of the cloth, the closeness of its texture, and, above all, to the attractive terms of payment." The competition of German with English goods in Palestine is very noteworthy. In 1894, England had 15.6 per cent of all the imports into Palestine in her hands; in 1897, her share had sunk to 10.8 per cent. Germany's share, on the other hand, rose in 1896 to 8.9 per cent from 7.3 per cent in 1894. The Germans attribute their success in Palestine chiefly to the numerous commercial travelers whom they send out. According to a report of the British consul in Jerusalem, only four English commercial travelers visited Palestine in the year 1895, while there were twenty-nine Germans, eighteen Swiss, and thirteen Frenchmen who came to show their wares and to study the wants of their customers.

It is in branches of trade which lie a little apart from the greater national industries—but which, taken as a whole, contribute no less to national wealth—that Germans have exhibited their successful pertinacity. Of the pins that were imported at Constantinople in 1897, four-fifths came from Germany. The increase in

the export of Solingen steel goods to Egypt has already been noted in the English press. In the coal trade and in the export of machinery, England still easily maintains her preeminence. Yet German firms are beginning to challenge British supremacy even in these spheres. The Société Ottomane d'Heraclee, founded last autumn under the ægis of the Ottoman Bank for the purpose of working the coal mines of Heraklea, has given the contract for the construction of two funicular railways at Damarli-Karaklon and at Kerpitchlik to the firm of J. Pohlig in Cologne, the sole owners of the Otto rope railway patents. A narrow-gauge railway for conveying Mecca pilgrims from El Tor, on the Gulf of Suez, to the different quarantine stations was constructed by the Berlin firm Arthur Koppel. Large contracts for locomotives and other rolling stock have been obtained in recent years by the Munich works of T. A. Maffei and by the Cologne firm of Von der Zypren Bros. & Co. The Nuremberg Machine-Making Company has been largely concerned in contracts for bridges; while the firm of Felten & Guillaume, in Muhlheim, exported considerable quantities of galvanized wire rope during the past year. The brush industry, represented by a large Nuremberg firm, has secured a market for its manufactures in Turkey. Certain branches in which France had hitherto a monopoly in the Levantine market are now invaded by the Germans. Thus cast-metal heating and cooking stoves are exported to the Levant from Westphalia, Karlsruhe, and, above all, from the Lauchhammer works in Saxony, to an extent which now far exceeds the French trade. The number of these kinds of stoves yearly imported to Constantinople is estimated at 5,000, and their price ranges from 30 to 180 marks (1 mark=23.8 cents). Delftware (faience) stoves were supplied for the Levant almost exclusively by France till about ten years ago. There is now a keen competition on the part of the Meissen porcelain factories and the firm of Villeroy & Boch, of Mettlach, in the Saar district. German successes are so often due to cheapness combined with inferiority that it is of interest to remark in this case that, although the German prices for delftware stoves are higher than the French, yet their exports are beginning to command the market. The quality of the German stoves is said to be beyond question superior. However this may be, the German trade is so actively represented by agents in Constantinople that it is yearly gaining hand over hand. Germany and Austria-Hungary together, I am informed, supply probably not less than 75 per cent of the delftware stoves exported to the East.

In the sphere of electrical appliances, Germany reigns preeminent in the East. Sofia and in part Constantinople itself have been supplied with their systems of electric lighting by German firms, who have also installed the electric light for the municipality of Kalamata, in Greece. At Kalamata, the company of Hiedemann & Co., of Cologne, have constructed an electric railway to the harbor of Kallivia. In Roumania, the Elektrizitäts Gesellschaft, formerly W. Lahmeyer, of Frankfurt, have established a branch of their firm. The world has been reading an account of the electric lighting of the palace of the Sultan at Yildiz, just carried out by the great Berlin firm of Siemens & Halske, who gave a Magdeburg and Buckau firm the contract for the necessary machinery.

The German export trade, I am assured on all hands, owes its successes to the stolid, steady perseverance of German industrialists, who imitate the methods of the German general staff and, it may be added, those of our own admirable sirdar in neglecting no detail, however trivial, in their plan of campaign. Putting their pride in their pockets, they accommodate their system to the task in hand. Like great generals and strategists, they are perfectly content to labor for long years in obscurity and to "cast their bread upon the waters," conscious that "after many days" it will return to them. Above all, they study the business ways of their customers, and do not thoughtlessly apply western standards to eastern transactions.

Fertility of resource and a prompt willingness to abandon their own experi-

ments when these prove unsuitable for the purpose in view, are also characteristic of German commercial methods. In the Balkan States, for example, they tried the establishment of warehouses for the exhibition of German products. This was found not to answer, and the idea of commercial museums was simply dropped. In its place, the system of sending out large numbers of energetic, well-educated, and experienced commercial travelers was adopted, and it has hitherto yielded the best results.

I append some statistics of foreign trade with Turkey. From the first line of figures, Turkish Government contracts and nonrecurrent supplies of material for railways are excluded:

Description.	1893.	1894.	1895.	1896.	1897.
<i>German trade.</i>					
General trade.....	*\$6,619,018	\$5,588,478	\$5,044,410	\$4,875,668	\$6,797,518
Government and nonrecurrent railway contracts.....	3,129,462	452,438	4,242,588	4,173,330	561,680
<i>Trade of other nations.</i>					
England			26,435,850	25,376,988	33,325,950
France	13,216,616	12,568,304	12,177,270	9,662,324	11,662,000
Italy	4,268,768	4,451,076	5,070,114	4,802,602	5,950,000
Belgium	6,902,000	11,662,000	6,902,000	3,829,420	

* The values, expressed in marks in the original, have been reduced to United States currency in the Bureau of Foreign Commerce.

Notes from Cuba.—The following extracts are from the Habana Reporter, in its editions of October 26 and November 2, 1898:

THE SITUATION.

Everybody is fully aware of the change that the Island of Cuba has already commenced to undergo, but few stop to consider the magnitude of such radical evolution and of the enormous amount of work that it entails.

If it is considered that each one of the departments of government is to be replaced by others with new methods, new regulations, new officials and employees, which have to be trained into their respective duties, the immense importance of the transformation becomes more apparent.

The United States authorities have wisely sent to Cuba their best organizers, men of recognized experience and ability for each department, who are working like beavers in their various assignments, studying minutely every detail, and recommending to Washington what is proper and best for the successful general reorganization of government in the island. The precision, foresight, and tact employed by these officials is truly admirable; and when the fact that they are at the same time exposing their lives to disease is taken into account, their work becomes all the more meritorious and praiseworthy.

Meanwhile, the two elements formerly so hostile to each other—Spaniards and Cubans—are waiting peacefully and in a state of expectancy for the completion of the regenerating task imposed upon themselves by the Americans. It is wonderful that these elements, living now side by side and even mingling with each other and not yet disarmed, should so well conduct themselves; and it shows that the people of Cuba are anxious for peace and stability to prosecute their work, and that they are tired of strife and disorder.

Under the assurance of the proximate establishment of good management of

affairs, the planters, who during the late prolonged struggle suffered so much and who welcomed the intervention of the American nation to stop a ruinous war, are now preparing to reconstruct their plantations and commence to work with renewed vigor and faith in the future. Such preparations are to be noted in the districts of Habana, Pinar del Rio, Matanzas, Las Villas, Sagua, Santiago de Cuba, and elsewhere.

LABOR.

The main difficulty that the new authorities in Cuba will have to confront and solve is to furnish work for the thousands at present unemployed throughout the island.

Until the various cultivations are once more started under proper protection and guaranty, without which the planters will not venture to resume operations, this mass of idle people must be taken care of in some manner. At present, they are living practically on popular charity, for there is no properly organized system of relief, excepting a few associations who render assistance in a small way. This state of things would of itself be sufficient to start a fresh revolution in any other country. Here, the people are orderly and resigned to their misery.

It is said that a railroad will be built from one to the other extreme of the island, and it is also reported that the work of improving the sanitary conditions of Habana and other places will be undertaken as a necessary war measure. This will furnish labor for many hundreds or thousands of the unemployed, and the country will benefit both ways. These practical and effectual measures will no doubt have an excellent effect.

As to immigration either from the United States or other countries, it would prove premature at present and until the resources of the island are again developed on a good working basis. It would then be advantageous. Such degree of development should not be difficult or tardy to attain under good direction and management of affairs, for Cuba has already proved its quick recuperative powers, with its magnificent natural resources.

CATTLE.

Since the blockade was raised, cattle have come in quite freely, but not in excess, and for beef purposes there is an ample supply at present. But the country in general is in need of cattle for breeding purposes to replace what was consumed, wasted, and destroyed during the late struggle.

There is special scarcity of oxen for labor in preparing lands for sugar and tobacco cultivation, these animals being indispensable for such work; and great numbers will be required. There is now considerable speculation with these animals, and those who venture to bring them and put them in pasture, for sale as opportunity presents, will most probably obtain good profit. These animals should be already "broken in" and ready for work.

The Mexican oxen, although smaller and less powerful than the American, give better results, because they become acclimated more readily, with less risk of loss to the planters.

THE HABANA MARKET.

The market is overstocked with all the principal articles of consumption, and, in consequence, values do not improve at all, and sales are made at cost and even at a loss by those who can not hold the goods for better figures. Consumption is slow and necessarily limited, because there is very little outlet into the interior, where the people lack the means to obtain the necessaries of life.

Importers and consigners of merchandise have always overlooked the fact that everything imported into Cuba is consumed locally, there being no reexportation; hence this overstocking.

COLD STORAGE.

One of the principal necessities in Cuba, and especially in Habana, is cold storage for perishable goods. It is surprising that this has not been established long since, for it is a business that would most undoubtedly pay and would prove of immense benefit to trade generally.

The climatic conditions are such that nothing perishable can be kept any length of time without considerable or total loss; hence, many importers abstain from bringing certain classes of goods, or, if they are imported, they have to be sold at very high prices in order to compensate for the spoiling of a portion of each parcel and the leakage or shrinkage, according to the nature of the merchandise. Suitable cold storage would obviate this difficulty effectually, and the enterprise would surely have good support.

The selection of buildings for the purpose is an easy matter, for there are many admirably adapted in every way, which could be transformed at a comparatively small cost; they are spacious, solidly built fabrics, with massive walls. It is to be hoped that some enterprising firm will soon undertake this business, which has every promise of success.

SPANISH-AMERICAN IRON COMPANY.

The following is translated from the *Gaceta de los Ferrocarriles*, published in this city:

"The iron ore of this company, which formerly was shipped solely to the United States, where about 3,000,000 tons have been sent in the last few years, has begun to be exported to Europe. It is well thought of in the United Kingdom, as also in Belgium and Germany, thirty-eight cargoes with 121,925 tons having been dispatched for that part of the world.

"The progressive exports of this ore in the last three years have been as follows: In 1895, 74,000 tons; 1896, 115,000 tons; and 1897, 206,000 tons.

"The exploitation and shipment is done with little expense, most of the work being automatic. The mines are situated on the southwest of the island, and the shipment is made through the Bay of Daiquiri, on the Caribbean Sea.

"Of course, the reason of the general good acceptance of this ore is its prime quality, as demonstrated in the following analysis:

	Per cent.
"Metallic iron.....	62
"Metallic manganese.....	0.097
"Metallic copper.....	0.056
"Sulphur.....	0.072
"Phosphorus.....	0.029
"Aluminium.....	0.712
"Lime.....	1
"Magnesia.....	0.381
"Silica.....	7.225

"As can be readily seen, it is an excellent ore for Bessemer steel and one of the best hematites known. The mines are on the surface, the extracting being done in the open air; and thousands of tons of ore are dislodged at a single blast with powerful explosives, after which all that is necessary is to reduce it to suitable size for the ovens. It is carried on inclined planes on trucks to the railroad cars, of 23 tons capacity each, and these discharge into chutes on the company's wharf, from which it is loaded into the ships."

DISTILLING INDUSTRY.

One of the industries in Cuba is the manufacture of alcohol from sugar molasses. There are several distilleries scattered over the country, the principal ones being located at Habana, Matanzas, and Cardenas, on the north side. Besides these, some of the larger sugar plantations have their own stills and do their own boiling and distilling.

A considerable portion of the product is used by the home manufacturers of liquors consumed in Cuba. But the bulk has been exported to Spain and the Argentine, until of late years, when the first-named country imposed a heavy prohibitive duty on the spirits from its own colony, barring them out in favor of the European production. Thus, the exports have been greatly reduced. The scarcity of the sugar crops has also limited this industry to small proportions.

The total capacity of the distilleries, including the smaller plantation stills, may be estimated at, say, 250,000 pipes or puncheons of 130 gallons of crude spirits or aguardiente.

Calculating the coming crop of sugar at 500,000 tons and the output of molasses from the same at 30,600,000 gallons, and supposing all this quantity is converted into spirits, it would render 150,000 pipes or puncheons of spirits, which could be easily distilled by the combined capacities of the distilleries at Habana, Matanzas, and Cardenas. Some of the planters, however, will probably do their own boiling, so that the work of the distilleries will be reduced in part.

This output, however, would be excessive, because there is not sufficient market open for the article. The ruling prices are as follows: Aguardiente, 22°, or crude spirits, \$14 to \$17 per 130 gallons; alcohol, 42°, first quality, \$50 to \$55 per 173 gallons; alcohol, 42°, second quality, \$40 to \$43 per 173 gallons.

Commerce of Hawaii in 1897.—A British Foreign Office report (No. 2193, annual series) says that the value of the imports into the Hawaiian Islands in 1897 was £1,822,879 (\$8,871,041), an increase of £345,192 (\$1,679,877) over 1896; and the value of the exports was £3,304,491 (\$16,081,305), a gain of £104,475 (\$508,428) over the previous year. The increase in imports, continues the report, is noticeable in almost every article on the list, especially in provisions, wearing apparel, hardware, agricultural implements, and machinery; and the increase in exports is due mainly to an increased output of sugar, of which, according to the customs returns, 232,334 tons were exported, all to the United States, during the year.

Of the imports, the United States contributed 76.94 per cent; Great Britain, Canada, and the colonies together, 11.85 per cent; and the balance was distributed about equally between Germany, China, Japan, and other countries. Of the exports, 99.62 per cent went to the United States, and sugar represented 96 per cent of the total. The chief articles of export, apart from sugar, were: Rice, £46,525 (\$226,414); hides, skins, and wool, £23,434 (\$214,042); coffee, £20,562 (\$100,065); various fruits, £18,728 (\$98,140).

The report assigns as the reason why the United States has such a large proportion of the trade (apart from the difference in tariff)

the adaptability of American goods for the Hawaiian market, the reduced rates of transportation and consequently cheaper prices, the excellent packing of cotton, etc. The following articles are still imported from Europe: Cement, crockery, corrugated iron, oils, paints, bags (though most of these now come from India), tin plates, twine, jute manufactures, fire bricks, and certain kinds of brushes.

The machinery used in the sugar factories is largely of local manufacture, the Honolulu Iron Works being an up-to-date institution, capable of turning out excellent work. The plows and farm implements, as well as the small locomotives on some of the estates, come almost invariably from the United States.

Although the soil of the islands is undoubtedly rich and fertile, the demand made upon it by almost continuous cropping without any alternation of crops renders the use of fertilizing agents a necessity. There are two local factories, which manufacture 10,000 tons per annum. One is of considerable size, making its own sulphuric acid and producing an excellent fertilizer. There is also a large importation of fertilizers from the United States and Europe.

Coal for steamer use to the extent of 70,000 tons was imported, principally from British Columbia, Australia, and New Zealand; about 700 tons of hard coal for smithy purposes came from the United States.

In cotton goods, the United States already has a large proportion of the trade, and a monopoly of boots and shoes, felt hats, and the better class of straw hats.

The sugar industry of the islands prospered in 1897, all the plantations paying dividends. Intelligent systems of cultivation are in vogue. The sugar planters have formed themselves into an association and have established a laboratory and experimental station, from which much benefit has been derived. The crop for the year was the largest yet reached—251,126 tons of 2,000 pounds. The 1897-98 crop will probably be under this, owing to the dry weather last year. There are fifty-six sugar plantations on the islands.

The cultivation of coffee is extending, but up to the present no large estates have been opened, the area planted being made up of a number of small holdings. It is difficult to obtain exact information as to the area under cultivation, but the following figures are approximately correct:

	Number of acres.
Trees over three years old.....	550
Trees from one to three years old.....	1,050
Trees under one year old.....	400
Total.....	2,000

In addition, there is a fair area of what is known as wild coffee—that is, coffee which has not been scientifically planted or subjected to the more approved methods of pruning, etc., but which has been allowed to grow almost entirely wild.

The export of coffee in 1897 was 337,158 pounds, or nearly double that of 1896.

Among the chief articles of import in 1897 may be mentioned—

Articles.	Value.	
Dry goods.....	£102,308	\$497,882
Machinery.....	122,806	597,635
Groceries.....	125,747	611,948
Lumber.....	50,579	280,941
Bags, shooks, and containers.....	48,923	238,084
Clothing, boots, and hats.....	76,402	371,810
Fertilizers.....	83,068	404,250
Grain and feed.....	76,096	370,322
Hardware, agricultural implements, etc.....	83,648	407,073
Flour.....	47,700	232,132
Tobacco, cigars, etc.....	45,585	221,839
Saddlery, carriages, etc.....	26,336	128,164
Oils.....	20,232	98,459
Wines, light.....	29,074	141,489
Fancy goods, millinery, etc.....	83,068	404,250

Shipbuilding in Germany.—The Board of Trade Journal, London, October, 1898, quotes the following from a Foreign Office report by the British commercial attaché at Berlin:

At the present moment, the shipbuilders of Germany have on hand a very large number of orders for both men-of-war and merchant vessels, and they are, it appears, largely for foreign countries. This remarkable development of German shipbuilding in the last few years has shown that the German industry is now quite on a par with its English rival. The Schichau, at Elbing; the Vulcan, at Grabow; and the Germania, at Kiel—are the principal yards for building ships in Germany. Vessels have been constructed for Austria, Norway, Sweden, Turkey, China, Brazil, and, recently, Italy, Japan, and Russia. Since 1895, German yards have delivered no less than twenty-four men-of-war for foreign navies, namely, three ironclads, ten torpedo destroyers, and eleven torpedo boats; there are now in hand twenty-two other vessels, namely, one ironclad, three large other men-of-war, ten torpedo destroyers, and eight torpedo boats.

The last annual report of the Union of Hamburg Shipping Companies says that the altered position of the United States in the East will necessitate a further increase of protection for German interests by sea in eastern trade. The building of ships, it continues, should be made as cheap as possible, and freight on the State railways plays a prominent part in connection with this subject. A new reduced tariff for iron for shipbuilding has come into force during this year, which is also applicable to articles going to seaports when destined for the building, repairing, or fitting out of vessels for river traffic. Further reductions, however, are urged in order to enable Germany to satisfactorily compete with the United States.

Imports of Furniture into the Philippines.—The *Moniteur Officiel du Commerce*, Paris, June 16, 1898, gives the following statistics, showing the imports of furniture into the Philippines for the year 1895:

Country of production	Furniture in turned wood, varnished, etc., with the exception of that upholstered with leather or cloth.			Furniture with gilding and ornaments of mother-of-pearl, upholstered with leather and cloth.		
	Weight.	Value.		Weight.	Value.	
	100 kilos.*	Piasters.†		100 kilos.*	Piasters.†	
Spain.....	11,026	3,394	\$1,722	4,138	2,183	\$1,108
Germany.....	49,499	15,760	7,997	4,416	2,215	1,124
Austria-Hungary.....	4,937	1,495	758			
Belgium.....	189	55	27			
China.....	77,380	23,760	12,058	15,110	8,000	4,060
United States.....	119	40	20	150	90	46
Holland.....				13	5	2
England.....	8,410	2,625	1,332	2,866	1,455	738
Italy.....	244	75	38			
Japan.....	6,299	2,055	1,043	3,740	1,875	952
Singapore.....	50	20	10	260	130	66
Switzerland.....	54	15	12	122	75	38
France.....	7,016	2,170	1,101	3,625	1,865	946
Total.....	165,223	51,464	26,118	34,440	17,893	9,080

*220.46 pounds.

†Probably Mexican currency; the reductions are made on this basis.

For this market, the more showy and effective the furniture, the greater the chance of finding a purchaser. In fact, ordinary furniture can not compete in point of cheapness with that made by local Chinese manufacturers, who adapt their goods to all tastes and follow all suggestions. There is an opening for French salon and dining-room furniture.

Agricultural Machinery in Paraguay.—The following is from the *Consular Journal and Greater Britain*, London, November 10, 1898:

Manufacturers of agricultural machinery and implements should lose no time in placing themselves in direct communication with Paraguay. We do not mean by dilatory letter writing or by ambiguous cabling. Let smart representatives, who will know how to deliver a message, discuss terms, and conclude a bargain, proceed forthwith to Paraguay. To the very natural interrogation, Why this haste? we reply: Paraguay, one of the most promising of the South American states, is about to take up agriculture on a large scale, for which the country is eminently suited. Stock raising has hitherto occupied most of the time and acres of dwellers in Paraguay, but now the notion is to apportion some of these fertile tracts to raising other kinds of products—cereals, for example. The Government is behind the scheme and steps will be taken to obtain a plentiful supply of colonists to cultivate the land. It is going to be an important movement, and British manufacturers should have their agents early on the spot, with their agricultural machines and implements all ready for inspection as the colonists arrive. It will be little use trailing up with them after they have set out for the fields, as by that time they will be provided with all the appliances they require. If this good market is to be secured, it can only be done by prompt personal representation of the best kind.

Need of United States Warehouse in Brazil.—The Rio News, Rio de Janeiro, October 25, 1898, noting the formation of a syndicate of London capitalists to start a large general store in Buenos Ayres for the sale of articles of English manufacture, says:

During the last ten or twelve years, we have repeatedly advised our friends in the United States to adopt such a scheme as the above for the introduction of their manufactures into this market. Commercial travelers are coming and going, commissions have visited us to investigate the conditions of trade in this country, and thousands of letters have been received on the subject of trade relations. And at times so urgent have been the inquiries, that it has seemed but a question of days before the market would be flooded with American goods. But the days slipped by and the effort soon exhausted itself, the result being that no impression whatever had been made upon the market.

In our discussions with the representatives of American manufacturers, we have advised their cooperation in establishing a large retail establishment in this city, under the management of trustworthy and experienced men, which should cover the sale of a wide variety of manufactured goods. The prime object should be to place these manufactures within the reach of consumers. Established commercial houses will be very slow to deal in goods unknown to their customers, but as soon as a demand is created, they will readily fall in line. It should therefore be the object of such a general store to introduce goods and create a demand for them; and to do this, it should be made as attractive as possible and should include the widest possible variety of articles. We have but little faith in commercial travelers and expositions as a means for introducing manufactured goods, for they are transitory in effect and disappointing to those who wish to continue dealing in certain articles. The better method is the one we have recommended—the opening of a permanent retail establishment for the sale of a wide variety of manufactured goods. It may be provided with a wholesale department, but its principal object should be to introduce the goods to consumers.

We do not understand that a very large cash capital would be required, for the shareholders would be the manufacturers themselves, and their principal investments would consist of manufactured goods. And the profits would be derived, not so much from this pioneer establishment (which should be more than self-supporting), but from the wider demand for goods in a new market through the regular trade. In our opinion, the scheme is not only practicable, but it promises immediate good results.

Industrial Premiums in Chile.—The following is from the South American Journal, London, October 22, 1898:

It has long been the policy of the Chilean Government to give protection and assistance to those who would undertake to establish new industries, which they believed would be suitable for the country and able to live alone, once initiated. Recently, there has been a movement in favor of extending this system, and the Government have commissioned the Sociedad de Fomento Fabril to consider what new industries they thought were required, and to submit suggestions for subsidizing them. This society has just issued a report, which we find in Chilean papers just come to hand. It is too extensive a document to be given here at length, but the proposals it makes may be concisely stated as follows:

It is recommended that a subvention of \$200,000 (\$73,000 in United States currency) be granted to whoever first contracts to establish works for the production of

cast iron (presumably from ores of the country), and a further subvention of \$100,000 (\$36,500) annually for the next three years. For the establishment of a factory for spinning and weaving flax, it is proposed to grant a subvention of \$50,000 (\$18,250); for the manufacture of sulphuric acid, a similar amount; and also for the manufacture of nitrate of potash from minerals found in the country. A premium of \$25,000 (\$9,125) is proposed for the establishment of a paper mill to make white paper. These premiums may be repeated in the second and third years if thought necessary by the Government. The following premiums are proposed to be paid once only: Fifty thousand dollars (\$18,250) for the establishment of a glass factory; \$50,000 (\$18,250) for a pottery; \$25,000 (\$9,125) for an establishment for the manufacture of chloride of potash; \$25,000 (\$9,125) for that of superphosphate and artificial manure; \$50,000 (\$18,250) is proposed for the manufacture of sack cloth and a like sum for the manufacture of common carpets; \$25,000 (\$9,125) for the manufacture of matches, and \$25,000 (\$9,125) for that of felt hats; for the making of Portland cement, \$40,000 (\$14,600); and for stearin candles, \$20,000 (\$7,300). Premiums of \$100,000 (\$36,500) each are also proposed for the establishment of factories for the making of buttons, distillation of perfumes, manufacture of celluloid, baskets by machinery, iron and brass bedsteads, and lamps for petroleum and gas.

Commerce of Erithrea.—The Board of Trade Journal, October, 1898, quotes from the *Movimento Commerciale del Regno d'Italia* the following statistics in regard to the trade of Massaua. It consists almost entirely of goods in transit, those coming from the interior of the African continent being exported to India, Europe, or the Red Sea ports, and those imported into Massaua by sea being destined for the interior. The following table shows the value of the imports into Massaua for the year 1896, the latest year for which figures are available, as compared with 1895:

Countries of origin.	1895.		1896.	
<i>Dutiable articles.</i>				
Europe	£26,920	\$131,006	£74,780	\$363,917
Asiatic Turkey.....	35,760	174,026	109,680	533,758
Aden.....	186,700	908,576	246,540	1,199,787
Egypt	21,100	102,683	24,600	119,716
Interior of Africa.....	27,650	134,559	18,190	88,522
Other Italian possessions on the Red Sea.....	8,300	40,392	10,000	48,665
<i>Articles free of duty.</i>				
Italy.....	72,980	355,157	187,430	912,128
Assab and other Italian possessions.....			15,670	76,250
Total	379,410	1,846,399	686,890	3,342,750

The increase in 1896 was £307,480 (\$1,496,351), or 44.7 per cent.



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Full directions for binding the Consular Reports are given in No. 131, page 663.

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

These estimates "are to be taken (by customs officers) in computing the value of all foreign merchandise made out in any of said currencies, imported into the United States."

The following statements, running from January 1, 1874, to October 1, 1898, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account that the ruble of Russia, for instance, has fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, and 1882 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz, (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

VIII VALUES OF FOREIGN COINS AND CURRENCIES.

A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic*.	Gold and silver..	Peso.....	\$0.96,5	Gold—Argentine (\$4.82,4) and ¼ Argentine; silver—peso and divisions.
Austria-Hungary†.....	Gold	Crown.....	.20,3	Gold—20 crowns (\$4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do .....	.....do	1.00	
Chile.....	.....do	Peso.....	.36,5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centismos.
Cuba	Gold and silver..	.....do .....	.92,6	Gold—doubloon (\$5.01,7); silver—peso.
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	.....do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	.....do	Mark.....	.19,3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling...	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti .....	.....do	Gourde.....	.96,5	Silver—gourde.
Italy.....	.....do	Lira .....	.19,3	Gold—5, 10, 20, 50, and 100 lire silver—5 lire.
Japan ‡	Gold.....	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia .....	.....do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin.....	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—\$2 (\$2.02,7).
Portugal.....	.....do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia ¶ .....	.....do	Ruble.....	.51,5	Gold—imperial (\$7.718) and ½ imperial (\$3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed in the Argentine Republic.

† On reference to the table of "fluctuating currencies," it will be seen that Austria had the silver standard up to and including the quarter ended July 1, 1892. The next quarter (October 1) inaugurated the gold standard (see note under table of "fluctuating currencies").

‡ For particulars as to the change from silver to the gold standard, see CONSULAR REPORTS No. 201, p. 259.

§ The Netherlands florin, as will be seen in the "fluctuating" table, became fixed in value (40.2 cents) in 1880.

¶ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—Countries with fluctuating currencies, 1874-1890.

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*.	Silver.....	Florin.....	\$0.47,6	\$0.45,3	\$0.45,3	\$0.41,3	\$0.40,1	\$0.39,8
Bolivia.....	do.....	Dollar until 1890; bolivi- ano there- after.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America.....	do.....	Peso.....	.96,5	.91,8	.91,8	.83,6	.....	.....
China.....	Silver.....	Halkwan tael.	1.61	1.61	.....	.....	.....	.....
Colombia.....	do.....	Peso.....	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador.....	do.....	do.....	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt.....	Gold.....	Pound (100 piasters).	.....	.....	4.97,4	4.97,4	4.90	4.90
India.....	Silver.....	Rupee.....	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan.....	Gold.....	Yen.....	.99,7	.99,7	.99,7	.99,7	.....	.....
.....	Silver.....	.....	.....	.....	.....	.....	.87,6	.86,9
Mexico.....	do.....	Dollar.....	1.04,7½	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands‡.....	Gold and Silver.	Florin.....	.40,5	.38,5	.38,5	.40,2	.....	.....
Peru.....	Silver.....	Sol.....	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia.....	do.....	Ruble.....	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli.....	do.....	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*.	Silver.....	Florin.....	\$0.39,3	\$0.37,1	\$0.35,9	\$0.34,5	\$0.33,6	\$0.42
Bolivia.....	do.....	Dollar until 1880; bolivi- ano there- after.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America.....	do.....	Peso.....	.....	.....	.....	.69,9	.68	.85
Colombia.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt.....	Gold.....	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India.....	Silver.....	Rupee.....	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan.....	Gold.....	Yen.....	.....	.....	.99,7	.99,7	.99,7	.99,7
.....	Silver.....	.....	.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico.....	do.....	Dollar.....	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru.....	Silver.....	Sol.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia.....	do.....	Ruble.....	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli.....	do.....	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at \$4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—Quarterly valuations of fluctuating currencies.

Countries.	Monetary unit.	1895.				1896.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.	\$0.45,5	\$0.44,1	\$0.48,6	\$0.48,6	\$0.49,1	\$0.49,3	\$0.49,7	\$0.49
Central Amer- ica.	Silver peso.....	.45,5	.44,1	.48,6	.48,6	.49,1	.49,3	.49,7	.49
China.....	Amoy tael.....								.79,3
	Canton tael.....								.79
	Chefoo tael.....	.70,4	.68,3	.75,1	.75,2	.75,9	.76,3	.76,9	.75,8
	Chinkiang tael.....								.77,4
	Fuchau tael.....								.73,3
	Haikwan tael....	.74,9	.75,6	.80	.80	.80,8	.81,2	.81,9	.80,6
	Hankau tael.....								.74,2
	Ningpo tael.....								.76,2
	Niuchwang tael.....								.74,3
	Shanghai tael....	.67,3	.65,2	.71,8	.71,8	.72,5	.72,9	.73,5	.72,4
	Swatow tael.....								.73,2
	Takao tael.....								.70,8
	Tientsin tael.....	.71,4	.69,2	.76,1	.76,2	.76,9	.77,3	.78	.76,8
Colombia.....	Silver peso.....	.45,5	.44,1	.48,6	.48,6	.49,1	.49,3	.49,7	.49
Ecuador.....	do.....	.45,5	.44,1	.48,6	.48,6	.49,1	.49,3	.49,7	.49
India.....	Silver rupee.....	.21,6	.21	.23,1	.23,1	.23,3	.23,4	.23,6	.23,3
Japan.....	Silver yen.....	.49,1	.47,6	.52,4	.52,4	.52,9	.53,2	.53,2	.52,8
Mexico.....	Silver dollar.....	.49,5	.47,9	.52,8	.52,8	.53,3	.53,6	.54	.53,2
Persia.....	Silver kran.....			.08,9	.09	.09	.09,1	.09,2	.09
Peru.....	Silver sol.....	.45,5	.44,1	.48,6	.48,6	.49,1	.49,3	.49,7	.49
Russia.....	Silver ruble.....	.36,4	.35,3	.38,9	.38,9	.39,3	.39,5	.39,8	.39,2
Tripoli.....	Silver mahbub.....	.41,1	.39,8	.43,8	.43,8	.44,3	.44,5	.44,9	.44,2

Countries.	Monetary unit.	1897.				1898.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.	\$0.47,4	\$0.46,8	\$0.44,3	\$0.41,2	\$0.42,4	\$0.40,9	\$0.41,8	\$0.43,6
Central Amer- ica.	Silver peso.....	.47,4	.46,5	.44,3	.41,2	.41,4	.40,9	.41,8	.43,6
China.....	Amoy tael.....	.76,7	.75,7	.71,7	.66,4	.68,5	.66,2	.67,6	.70,6
	Canton tael.....	.76,5	.75,5	.71,5	.66,4	.68,3	.66	.67,4	.70,4
	Chefoo tael.....	.73,3	.72,4	.68,6	.63,7	.65,5	.63,3	.64,6	.67,5
	Chinkiang tael..	.74,9	.73,9	.70	.65,1	.66,9	.64,6	.66	.69
	Fuchau tael.....	.70,9	.70	.66,3	.61,6	.63,4	.61,2	.62,5	.65,3
	Haikwan tael....	.78	.77	.73,1	.67,8	.69,7	.67,3	.68,8	.71,8
	Hankau tael.....	.71,7	.70,8	.67,1	.62,3	.64,1	.61,0	.63,2	.66
	Ningpo tael.....	.73,7	.72,8	.68,9	.64	.64,3	.63	.65	.67,9
	Niuchwang tael.....	.71,9	.71	.67,2	.62,5	.65,9	.62	.63,4	.66,2
	Shanghai tael....	.70	.69,1	.65,5	.60,8	.62,6	.60,4	.61,7	.64,5
	Swatow tael.....	.70,8	.69,9	.66,2	.61,5	.63,3	.61,1	.62,4	.65,2
	Takao tael.....	.77,2	.76,2	.72,2	.67	.66	.66,6	.68	.71
	Tientsin tael.....	.74,3	.73,4	.69,5	.64,6	.66,4	.64,1	.65,5	.68,4
Colombia.....	Silver peso.....	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
Ecuador.....	do.....	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
India.....	Silver rupee.....	.22,5	.22,2	.21,1	.19,6	.20,1	.19,1	.19,9	.20,7
Japan.....	Silver yen.....	.51,1	.50,5						
Mexico.....	Silver dollar.....	.51,5	.50,8	.48,2	.44,6	.46	.44,4	.45,4	.47,4
Persia.....	Silver kran.....	.08,7	.08,6	.08,2	.07,6	.07,8	.07,5	.07,7	.08
Peru.....	Silver sol.....	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
Russia.....	Silver ruble.....	.37,9	.37,4						

* The value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal.....	4.422 gallons.
Ardeb.....	Egypt.....	7.6907 bushels.
Are.....	Metric.....	0.02471 acre.
Arobe.....	Paraguay.....	25 pounds.
Arratel or libra.....	Portugal.....	1.011 pounds.
Arroba (dry).....	Argentine Republic.....	25.3175 pounds.
Do.....	Brazil.....	32.38 pounds.
Do.....	Cuba.....	25.3664 pounds.
Do.....	Portugal.....	32.38 pounds.
Do.....	Spain.....	25.36 pounds.
Do.....	Venezuela.....	25.4024 pounds.
Arroba (liquid).....	Cuba, Spain, and Venezuela.....	4.263 gallons.
Arshine.....	Russia.....	28 inches.
Arshine (square).....	do.....	5.44 square feet.
Artel.....	Morocco.....	1.12 pounds.
Baril.....	Argentine Republic and Mexico.....	20.0787 gallons.
Barrel.....	Malta (customs).....	11.4 gallons.
Do.....	Spain (raisins).....	100 pounds.
Berkovets.....	Russia.....	361.12 pounds.
Bongkal.....	India.....	832 grains.
Bouw.....	Sumatra.....	7.096.5 square meters.
Bu.....	Japan.....	0.1 inch.
Butt (wine).....	Spain.....	140 gallons.
Caffiso.....	Malta.....	5.4 gallons.
Candy.....	India (Bombay).....	529 pounds.
Do.....	India (Madras).....	500 pounds.
Cantar.....	Morocco.....	113 pounds.
Do.....	Syria (Damascus).....	575 pounds.
Do.....	Turkey.....	124.7036 pounds.
Cantaro (cantar).....	Malta.....	175 pounds.
Carga.....	Mexico and Salvador.....	300 pounds.
Catty.....	China.....	1.333½ (1¼) pounds.
Do*.....	Japan.....	1.31 pounds.
Do.....	Java, Siam, and Malacca.....	1.35 pounds.
Do.....	Sumatra.....	2.12 pounds.
Centaro.....	Central America.....	4.2631 gallons.
Centner.....	Bremen and Brunswick.....	117.5 pounds.
Do.....	Darmstadt.....	110.24 pounds.
Do.....	Denmark and Norway.....	110.11 pounds.
Do.....	Nuremberg.....	112.43 pounds.
Do.....	Prussia.....	113.44 pounds.
Do.....	Sweden.....	93.7 pounds.
Do.....	Vienna.....	123.5 pounds.
Do.....	Zollverein.....	110.24 pounds.
Do.....	Double or metric.....	220.46 pounds.
Chih.....	China.....	14 inches.

* More frequently called "kin." Among merchants in the treaty ports it equals 1.33½ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan.....	Sarawak.....	3,098 pounds.
Do.....	Siam (Koyan).....	2,667 pounds.
Cuadra.....	Argentine Republic.....	4.2 acres.
Do.....	Paraguay.....	78.9 yards.
Do.....	Paraguay (square).....	8.077 square feet.
Do.....	Uruguay.....	Nearly 2 acres.
Cubic meter.....	Metric.....	35.3 cubic feet.
Cwt. (hundredweight).....	British.....	112 pounds.
Dessiatine.....	Russia.....	2.6997 acres.
Do.....	Spain.....	1.599 bushels.
Drachme.....	Greece.....	Half ounce.
Egyptian weights and measures.....	(See CONSULAR REPORTS No. 144.)	
Fanega (dry).....	Central America.....	1.5745 bushels.
Do.....	Chile.....	2.575 bushels.
Do.....	Cuba.....	1.599 bushels.
Do.....	Mexico.....	1.54728 bushels.
Do.....	Morocco.....	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do.....	Uruguay (double).....	7.776 bushels.
Do.....	Uruguay (single).....	3.888 bushels.
Do.....	Venezuela.....	1.599 bushels.
Fanega (liquid).....	Spain.....	16 gallons.
Feddán.....	Egypt.....	1.03 acres.
Frail (raisins).....	Spain.....	50 pounds.
Frasco.....	Argentine Republic.....	2.5096 quarts.
Do.....	Mexico.....	2.5 quarts.
Fuder.....	Luxemburg.....	264.17 gallons.
Garnice.....	Russian Poland.....	0.88 gallon.
Gram.....	Metric.....	15.432 grains.
Hectare.....	do.....	2.471 acres.
Hectoliter:		
Dry.....	do.....	2.838 bushels.
Liquid.....	do.....	26.417 gallons.
Joch.....	Austria-Hungary.....	1.422 acres.
Ken.....	Japan.....	6 feet.
Kilogram (kilo).....	Metric.....	2.2046 pounds.
Kilometer.....	do.....	0.621376 mile.
Klafter.....	Russia.....	216 cubic feet.
Koku.....	Japan.....	4.9629 bushels.
Korree.....	Russia.....	3.5 bushels.
Last.....	Belgium and Holland.....	85.134 bushels.
Do.....	England (dry malt).....	82.52 bushels.
Do.....	Germany.....	2 metric tons (4,480 pounds).
Do.....	Prussia.....	112.29 bushels.
Do.....	Russian Poland.....	113½ bushels.
Do.....	Spain (salt).....	4,760 pounds.
League (land).....	Paraguay.....	4,633 acres.
Li.....	China.....	2,115 feet.
Libra (pound).....	Castilian.....	7,100 grains (troy).
Do.....	Argentine Republic.....	1.0127 pounds.
Do.....	Central America.....	1.043 pounds.
Do.....	Chile.....	1.014 pounds.
Do.....	Cuba.....	1.0161 pounds.
Do.....	Mexico.....	1.01465 pounds.
Do.....	Peru.....	1.0143 pounds.
Do.....	Portugal.....	1.011 pounds.
Do.....	Uruguay.....	1.0143 pounds.
Do.....	Venezuela.....	1.0161 pounds.
Liter.....	Metric.....	1.0567 quarts.
Livre (pound).....	Greece.....	1.1 pounds.
Do.....	Guiana.....	1.0791 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Load.....	England (timber).....	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 super- ficial feet.
Manzana.....	Costa Rica.....	1½ acres.
Do.....	Nicaragua and Salvador.....	1.727 acres.
Marc.....	Bolivia.....	0.507 pound.
Maund.....	India.....	82½ pounds.
Meter.....	Metric.....	39.37 inches.
Mil.....	Denmark.....	4.68 miles.
Do.....	Denmark (geographical).....	4.61 miles.
Milla.....	Nicaragua and Honduras.....	1.1493 miles.
Morgen.....	Prussia.....	0.63 acre.
Okc.....	Egypt.....	2.7225 pounds.
Do.....	Greece.....	2.84 pounds.
Do.....	Hungary.....	3.0817 pounds.
Do.....	Turkey.....	2.85418 pounds.
Do.....	Hungary and Wallachia.....	2.5 pints.
Pic.....	Egypt.....	21¼ inches.
Picul.....	Borneo and Celebes.....	135.64 pounds.
Do.....	China, Japan, and Sumatra.....	133½ pounds.
Do.....	Java.....	135.1 pounds.
Do.....	Philippine Islands (hemp).....	139.45 pounds.
Do.....	Philippine Islands (sugar).....	140 pounds.
Pie.....	Argentine Republic.....	0.9478 foot.
Do.....	Castile.....	0.91407 foot.
Pik.....	Turkey.....	27.9 inches.
Pood.....	Russia.....	36.112 pounds.
Pund (pound).....	Denmark and Sweden.....	1.102 pounds.
Quarter.....	Great Britain.....	8.252 bushels.
Do.....	London (coal).....	36 bushels.
Quintal.....	Argentine Republic.....	101.42 pounds.
Do.....	Brazil.....	130.06 pounds.
Do.....	Castile, Chile, Mexico, and Peru.....	101.61 pounds.
Do.....	Greece.....	123.2 pounds.
Do.....	Newfoundland (fish).....	112 pounds.
Do.....	Paraguay.....	100 pounds.
Do.....	Syria.....	125 pounds.
Do.....	Metric.....	220.46 pounds.
Rottle.....	Palestine.....	6 pounds.
Do.....	Syria.....	5¾ pounds.
Sagen.....	Russia.....	7 feet.
Salm.....	Malta.....	490 pounds.
Se.....	Japan.....	0.02451 acres.
Seer.....	India.....	1 pound 13 ounces.
Shaku.....	Japan.....	11.9305 inches.
Sho.....	do.....	1.6 quarts.
Standard (St. Petersburg).....	Lumber measure.....	165 cubic feet.
Stone.....	British.....	14 pounds.
Suerte.....	Uruguay.....	2,700 cuadras (see cua- dra).
Sun.....	Japan.....	1.193 inches.
Tael.....	Cochin China.....	590.75 grains (trov).
Tan.....	Japan.....	0.25 acre.
To.....	do.....	2 pecks.
Ton.....	Space measure.....	40 cubic feet.
Tonde (cereals).....	Denmark.....	3.94783 bushels.
Tondeland.....	do.....	1.36 acres.
Tsubo.....	Japan.....	6 feet square.
Tsun.....	China.....	1.41 inches.
Tunna.....	Sweden.....	4.5 bushels.
Tunnland.....	do.....	1.22 acres.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Vara.....	Argentine Republic.....	34.1208 inches.
Do.....	Castile.....	0.914117 yard.
Do.....	Central America.....	32.87 inches.
Do.....	Chile and Peru.....	33.367 inches.
Do.....	Cuba.....	33.384 inches.
Do.....	Curaçao.....	33.375 inches.
Do.....	Mexico.....	33 inches.
Do.....	Paraguay.....	34 inches.
Do.....	Venezuela.....	33.384 inches.
Vedro.....	Russia.....	2.707 gallons.
Vergees.....	Isle of Jersey.....	71.1 square rods.
Verst.....	Russia.....	0.663 mile.
Vlocka.....	Russian Poland.....	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
 Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
 Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
 Gram equals 15.432 grains.
 Decagram (10 grams) equals 0.3527 ounce.
 Hectogram (100 grams) equals 3.5274 ounces.
 Kilogram (1,000 grams) equals 2.2046 pounds.
 Myriagram (10,000 grams) equals 22.046 pounds.
 Quintal (100,000 grams) equals 220.46 pounds.
 Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
 Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
 Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
 Liter equals 0.908 quart.
 Decaliter (10 liters) equals 9.08 quarts.
 Hectoliter (100 liters) equals 2.838 bushels.
 Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
 Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
 Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
 Liter equals 1.0567 quarts.
 Decaliter (10 liters) equals 2.6418 gallons.
 Hectoliter (100 liters) equals 26.418 gallons.
 Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
 Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
 Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
 Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.

Hectometer (100 meters) equals 328 feet 1 inch.

Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).

Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.

Are (100 square meters) equals 119.6 square yards.

Hectare (10,000 square meters) equals 2.471 acres.



CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

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FOREIGN-TRADE POLICIES.

At the request of the Chicago Trade Press Association, an instruction was sent by the Department September 27, 1897, to the consulates-general in France, Belgium, Great Britain, the Netherlands, Germany, Austria-Hungary, Switzerland, Russia, and Japan, requesting information in regard to the policies adopted by the respective Governments to extend foreign commerce. The last of the answers was received May 31, 1898. The reports are as follows:*

AUSTRIA-HUNGARY.

Consul-General Hurst, of Vienna, says:

In compliance with the Department's instructions relative to information as to the foreign-trade policy of the Austrian Government, I have the honor to make the following report:

MINISTRY OF COMMERCE.

The chief management of commerce, industry, shipping, post, telegraph, and telephone is in the hands of the Imperial and Royal Ministry of Commerce. The duties of this Ministry are:

(1) To institute preliminary negotiations for the conclusion of treaties relating to commerce, industry, and shipping, and to inspect the performance and execution of the same.

(2) To assist in regulating tariffs.

(3) To manage commercial and industrial affairs, especially in the case of boards of commerce and industrial, commercial, and

* Advance Sheets of reports have been sent to the Chicago Trade Press Association.

kindred associations, and to distribute concessions for the erection of public warehouses.

(4) To administer laws concerning the chambers of commerce and industry.

(5) To assist in the examination and ratification of statutes of unions for the furtherance of industry, commerce, and shipping, and in the incorporation of industrial banks, stock companies, etc.; and, further, to instruct these bodies in the rules of political economy.

(6) To assist in revising commercial, exchange, and maritime laws and in erecting and superintending trade, industrial, maritime, and polytechnical schools, as well as to introduce institutions and promulgate ordinances pertaining to other ministries which exert substantial influence on commerce, industry, and shipping.

(7) To assist in establishing and abolishing consulates, and in determining instructions to be given to consular officers relative to commercial affairs.

(8) To grant patents and to have general management of industrial exhibitions.

(9) To decide all administrative affairs concerning shipbuilding, maritime navigation (except the navy), and the Austrian Lloyd.

(10) To render decisions in cases of river steamship companies, especially on the Danube, Elbe, Weichsel, and Po.

The Imperial and Royal Ministry of Commerce collects and compiles commercial and consular reports, statistical statements of commerce, and political economy in general. In these duties, the department is assisted by the following bodies:

(1) In affairs relating to commerce, by the imperial and royal counselors, who form an advisory board (founded in 1892) for the development of house industries.

(2) In determining market values, by the imperial and royal commission, whose duty it is to decide annually the prices that shall form the basis for official statistics. This commission is composed of representatives from the ministries of Commerce and Agriculture, from the central statistical commission, from the chambers of commerce, and from various professions. This auxiliary body reports on the production and consumption of certain classes of products during the year, and investigates and explains the variations in quantities and values of leading products as compared with the foregoing year. The commission has also repeatedly been called upon to participate in the discussion of questions relating to the compilation of commercial statistics.

(3) By a tariff commission, which consists of a president, who is *ex officio* the Minister of Commerce, or his substitute, and fifty-two members, appointed in part from the ministries of Commerce,

Finance, and Agriculture and in part from the chambers of commerce, and which serves for three years.

(4) By the chambers of commerce and trade, which are composed of leading citizens chosen among proprietors, partners, or managers of business concerns, industrial or commercial corporations, factories or mines.

FUNCTIONS OF CHAMBERS OF COMMERCE.

With the exception of the Trieste district, where one-third of the chamber of commerce may consist of foreigners, the members must be Austrian citizens. These chambers, of which Austria has twenty-nine, have also foreign corresponding members.

The duties of these chambers are as follows:

(1) In general, to give expert opinions, upon the demand of the Government, on questions of commerce, and especially on bills touching commercial interests and on the organization of institutions tending to further trade. They have also the right of petition and protest in regard to all such questions.

(2) In particular, to collect statistics on commerce and trade and publish the same in a yearly report; and, in periods of five years, to compile a general report on the condition of trade in their respective districts.

(3) To register designs and trade-marks.

These chambers also directly encourage industry by supporting technical schools, granting scholarships, subsidizing museums, institutes, and associations. Some chambers have large legacies left them for commercial and industrial purposes, as, for example, the chamber of commerce of Vienna has a fund of more than 600,000 florins (\$243,600). In order to exemplify the mode of procedure of these chambers, reference may be made to the session of the Vienna Chamber of Commerce held on the 3d of November, 1897, during which the advisability of creating a central office for the preparation of commercial treaties was discussed. Branch offices, supported by Austrian firms who register therein, were established at Constantinople in 1870, at Alexandria in 1885, at Paris in 1887, at London in 1888, and at Salonica in 1889. These offices protect the interests of the registered firms.

OFFICIAL STATISTICS.

The statistics of exports from Austria-Hungary are obtained by a law which provides that all shipments for export by rail, mail, or otherwise must be accompanied by declarations as to their contents, nature, quantity, origin, and destination; from which data are derived the official commercial statistics.

The declaration must be, as a rule, in writing, upon blank forms

provided by the Government, and, in case of exportation by mail, it must be in duplicate. It may be oral—

(1) In case of imports and exports between neighboring states of articles needed for the household, house industry, farming, or local trade. The oral declaration, however, is limited to shipments subject to an import duty not exceeding 5 florins (\$2.03) and to shipments of goods on the free list in quantities not exceeding one wagonload of 25 double centners (about 6,175 pounds).

(2) In case of articles for improving house industries and small local trade.

(3) In case of shipments for retail.

(4) In case of driftwood.

(5) In case of export by commercial travelers.

For each declaration a fee, amounting to 6 kreutzers (2.4 cents) for written and 2 kreutzers (0.8 cent) for oral declarations, is exacted, to cover the cost of compiling the statistics. This fee is paid in official stamps bearing the words "K. K. Staats Gebühr." Violation of these ordinances is punishable by law.

The supreme management of Austrian official statistics rests with the central commission. This body is subordinate only to the Imperial and Royal Ministry of Education, and was established in 1863 for the purpose of making all statistical researches required by the Government. Its membership consists of representatives of the central departments, known as ordinary members, and representatives of science called extraordinary members. The expenses of this department, for 1897, amounted to 128,865 florins (\$52,319).

In the various ministries there are, in addition to the above, other statistical departments, as, for example, the statistical department of the Imperial and Royal Ministry of Commerce, the expenses of which for the year 1897 were limited to 147,320 florins (\$59,812).

MERCHANT MARINE.

By the law of 1893, all ships belonging to the merchant marine, and not having been constructed more than fifteen years, receive for a term of fifteen years an allowance, amounting for the first year to 6 florins (\$2.44) per registered ton for steamships, 4.50 florins (\$1.83) for iron or steel sailing vessels, and 3 florins (\$1.22) for wooden sailing vessels. Every succeeding year, this allowance is diminished 5 per cent. Domestic-built vessels of iron or steel receive an additional 10 per cent, and, if consisting at least one-half of home materials, 25 per cent. Ships older than fifteen years receive 50 kreutzer (20.3 cents) per registered ton amortization allowance.

Further, all ships passing to and from Austrian ports, except small coasters, receive, in the interests of home trade, 5 kreutzers (2

cents) per registered ton, and a trip allowance for every 100 marine miles for a term of ten years, excepting vessels of the Austrian Lloyd and others subsidized by the Government for postal service.

Finally, all kinds of vessels are free from taxation during the period from 1894 to 1898, both years inclusive. According to the law of 1897, the allowance for the merchant marine amounted to 334,300 florins (\$135,726), and is indexed in the budget of the Ministry of Commerce under the heading of "Subventionen und Dotationen," as follows:

Description.	Amount.	
Allowance for the Austrian Lloyd:	<i>Florins.</i>	
Mileage.....	2,910,000	\$1,181,460
Reimbursement of Suez Canal fees.....	608,840	247,189
Allowance for the Danube Navigation Co.....	250,000	101,500
Loan to the same, free of interest.....	250,000	101,500
Total.....	4,018,840	1,631,649

EXPORT AGENCIES, EXPOSITIONS, ETC.

In reply to the question, "What agencies are maintained in other countries under the direction of the Government for the exploitation of products, such as warehouses, exhibits, etc.," I would say that agencies of this character have not been established by Austria-Hungary. The Austrian chambers of commerce at Constantinople and elsewhere, before referred to, do not deal directly with the exploitation of their home products.

In the budget of 1897, the following allowances were made:

For—	Amount.	
Provincial and other fairs and foreign expositions for which no special appropriations are made.....	<i>Florins.</i>	
The Austrian Museum of Commerce.....	12,000	\$4,872
Exhibits at the Paris Exposition, 1900.....	40,000	16,240
	100,000	40,600

To these must be added the sum of 28,570 florins (\$11,599.42), expended for the maintenance of the old exposition buildings in Vienna.

TECHNICAL EDUCATION.

The beginning of industrial schools in Austria dates back as far as 1770-1785, when Sunday drawing schools were established, to the number of two hundred. These, however, did not succeed, and it was only with the opening of technical schools at Prague in 1806 and at Vienna in 1815 that technical education gained a foothold. Then followed the so-called Real schools in 1851-1867, intended to

serve as industrial institutes. About the same time, several professional trade schools were founded; for example, the weaving school at Reichenberg (1852), the drawing school for glass industries at Steinschönau (1856), and the school of art and industry in Vienna (1867); and in 1873, State industrial schools were introduced by the Ministry of Education. The professional trade schools were then transferred from the Ministry of Commerce to that of Education, and soon a uniform system prevailed throughout the entire Monarchy.

The industrial schools in Austria-Hungary are nearly all State institutions; there are, however, a few maintained by the separate provinces, but even these receive support from the General Government. For these, the Government expends:

For—	Amount.	
	<i>Florins.</i>	
Schools of architecture, engineering, art, and textile industry.....	1,166,200	\$473,477.20
Experimental stations (agriculture, etc.).....	123,727	50,233.16
Weaving, embroidery, and wood-carving schools.....	974,461	395,631.17
Drawing and modeling schools.....	8,600	3,492.00
General trade schools.....	88,300	35,849.80
Industrial-improvement schools.....	250,900	101,865.40

To these may be added the cost of the technical high schools and the Real or preparatory schools. Altogether, the Government pays 2,522,188 florins (\$1,024,008.33) for industrial schools. In addition to this, the provinces spend about 75,000 florins (\$30,450) for State schools.

According to the law of 1887, the chambers of commerce for Lower Austria must contribute 10 per cent of the expenses (which are determined by the provincial legislature) in the support of preparatory schools and improvement schools located in Vienna, and 15 per cent for the support of like schools elsewhere in Lower Austria.

There are in Austria 8 schools for the glass industry, 16 in lace and embroidery, 2 in musical instruments, 1 in leather, 1 in jewelry cutting, 1 in toys, 18 in basket ware; also schools for carpenters, locksmiths, turners, watchmakers, potters, coppersmiths, cutlers, coopers, bronze makers, goldsmiths, girdlers, etc.

Austria possesses 15 State industrial schools. Each includes a school for architecture and civil engineering, together with a foreman's school and special courses for locomotive engineers, plumbers, sculptors, stone masons, etc. There are also in Austria 4 art schools (one of which is joined to the Museum for the Study of Art and Industry in Vienna, founded in 1868) and 393 independent trade schools. Devoted to commercial interests are 12 high schools, 28 commercial high schools, and 79 schools for advanced instruction, 18 of the latter being managed as subdepartments to day schools.

EFFECTS OF TECHNICAL EDUCATION ON EXPORTS.

The annual statistics of imports and exports of Austria-Hungary (exclusive of precious metals) show the following figures for the last five years:

Year.	Exports.		Imports.	
	<i>Florins.</i>		<i>Florins.</i>	
1891.....	786,712,000	\$319,405,072	613,713,000	\$249,167,478
1892.....	722,721,000	293,424,726	622,571,000	252,763,826
1893.....	805,557,000	327,056,142	670,706,000	272,306,636
1894.....	795,475,000	322,962,850	699,992,000	284,196,752
1895.....	741,810,000	301,174,860	722,473,000	293,324,038

The export of manufactured articles, half finished and wholly finished, for the years 1894 and 1895, was as follows:

Description.	1894.		1895.	
	<i>Florins.</i>		<i>Florins.</i>	
Half-finished products.....	78,951,000	\$31,954,106	79,316,000	\$32,202,296
Wholly finished products.....	225,159,000	91,414,554	234,311,000	95,130,266

This continued improvement is undoubtedly due to the wholesome influence exerted by industrial schools.

TARIFF CHANGES.

The commercial policy of the Austro-Hungarian Government has undergone little or no change in the last twenty-five years. Austria-Hungary has a system of moderate tariff protection. The vigorous struggle for protection in France and Italy, in the early seventies, resulted in uniting and strengthening the opposition to the free-trade tendencies then existing. The low tariff, under the supplementary treaty with England, was detrimental to large branches of the textile industry, and the annexation of Alsace-Lorraine to Germany led to an abusive extension of the so-called improvement clause—*i. e.*, the importation of raw materials for reexport, and finally the reimportation of the same as finished products free of duty. Then came the crisis of 1873, affecting the railroad interests and stirring the iron interests into strong opposition to the low-tariff policy.

The loud demand of the chambers of commerce and the industrial factions for the termination of the commercial treaty with England found an unexpected support in the congress of political economists in Vienna in 1875, and so strong was the pressure to return to the protective-tariff policy that notice was given to England to terminate the treaty.

The second and decisive step was the breaking off of negotiations with Germany, and the final result was the autonomous tariff dated

June 27, 1878, placing flour and grain on the free list and increasing the duty on a few of the more refined classes of industrial products. But a general increase of the tariff rates was effected by a provision requiring all duties to be paid in gold coin, or in an officially determined rate in silver, and by a considerable increase of the so-called revenue duties on coffee, petroleum, etc. A 10 per cent retaliatory duty in addition to the tariff rates, and a 5 per cent retaliatory duty on all goods stated in the free list, was exacted from products of countries that did not observe the most-favored-nation clause in its application to Austria-Hungary. By the law of February 20, 1879, this tariff was extended to Dalmatia, Bosnia, and Herzegovina.

A treaty was concluded with Germany, similar to that of 1876 with England, for the term of one year only; it contained the most-favored-nation clause and restricted the improvement clause. When this treaty was renewed in 1880-81, the improvement clause was canceled in respect to cloth printing, dyeing, and bleaching. With France, a like treaty was concluded. It also contained the most-favored-nation clause, and reduced the duty on sparkling wines in exchange for certain privileges as to the importation of neat and other cattle. The treaty with Italy was made for a term of ten years, and gave a preference to Austrian linen in exchange for a tariff reduction on silk and Italian wines. The Servian treaty provided for certain tariff reductions in favor of Servian agricultural products, under the heading "frontier trade." The treaty with Roumania terminated in 1886, the attempt to renew it failing, and the retaliatory rates of the Austro-Hungarian tariff accordingly taking effect.

The German protective tariff of July 15, 1879, raising the duty on numerous industrial as well as agricultural products of Austria, furnished cause for the new Austro-Hungarian tariff of 1882, which contained higher rates for cotton thread, cloth, silk, glass, paper, clay, caoutchouc goods, and iron. It provided for duties on agricultural products in order to protect Hungary, because these rates were supposed to have a good effect in case of bad crops. It favored the importation of coffee, cacao, and tea by way of sea, and trebled the retaliatory rates. Some of these duties were put in merely to bring about future negotiations.

The result of these was the tariff of May 21, 1887. Then came the renewal of the treaty with England in 1887 and with Switzerland in 1888. A union of the middle European states was now proposed, for the purpose of guarding their common commercial interests against Russia and the United States; hence the treaties with Germany, Italy, Switzerland, and Belgium, which came into effect in 1892 and which will terminate in 1903. France and Great Britain also participated in them by means of the most-favored-nation clause.

New treaties were further concluded with Servia in 1892, with Roumania in 1893, and with Russia and Spain in 1894.

Besides these treaties, others are in effect without a definite term of duration, subject to termination on twelve months' notice, viz, with Denmark, Greece, Netherlands, Portugal, Sweden, and Norway. Treaties of amity, commerce, and navigation exist with China, Hawaii, Japan, Liberia, Persia, and Siam.

GENERAL REMARKS.

France, England, Hungary, and, above all, Germany have experienced a marked development and improvement during the last three years. Austria, on the other hand, has a crippled trade and moves slowly, without a good prospect for better times. Hungary, however, though belonging to the same Empire, is developing its resources and industries rapidly, and becoming more and more a self-reliant and enterprising state.

The Central Union of Austrian Industries called a meeting in Vienna on the 22d and 23d of November, 1897, for the purpose of devising means for the furtherance of the Austrian export business. The meeting attracted general attention, and its proceedings were discussed at length by the press. It passed the following motion:

That a commercial association (*Handelsgesellschaft*) be founded, equipped with ample capital, capable of aiding Austrian exporters and of doing a banking business, and prohibited from becoming a competitor with Austrian exporters.

The discussion brought out valuable opinions from leading commercial men. They seemed to think that the inability of Austria to progress in a business way and to compete with other nations was due largely to the scarcity of commercial salesmen and commission merchants abroad and to the consequent difficulty of the producers and manufacturers to get their goods upon the foreign markets. One of the speakers characterized the situation by saying: "If the ceiling of this hall in which we are assembled should fall, the whole Austrian export trade would be killed."

The small number of export concerns is not able to take care of the volume of goods that Austrian industries are capable of producing.

In his annual report (to appear in *Commercial Relations*, 1897-98), Consul-General Hurst, noting the decline in exports from Austria-Hungary in the past few years, says that it is not viewed with indifference by the statesmen of the country. He continues:

Every effort is being made to remedy the evil. The Minister of Foreign Affairs, in an altogether modern spirit, has openly discussed

the commercial situation, and has made practical business suggestions for its improvement. One recent radical measure was the reconstruction of the Oriental Academy, a time-honored training institution for the diplomatic service. This is now called the Consular Academy and will be conducted on up-to-date principles. Its chief object is the training of a certain number of young men to be consuls—consuls in the new sense, that is, effective, progressive commercial agents, whose business it is to detect opportunities in their respective fields for the introduction of home exports, and then to foster and increase the growth of the latter. One section of this academy is devoted to Asiatic interests, and the candidates are trained for service in the Far East. Many consuls, citizens of other countries, who now represent Austria-Hungary abroad in an honorary capacity will be replaced by trained and salaried Austro-Hungarian subjects.

BELGIUM.

Consul* Lincoln writes from Antwerp as follows:

There is not, in this country, a department devoted solely to the interests of commerce and industry. The Minister of Industry and Labor has the supervision of all matters pertaining to patents, trademarks, weights and measures, mines and mining, and regulations affecting labor in general.

Under the jurisdiction of the Minister of Foreign Affairs, there is a bureau dealing with all matters pertaining to foreign commerce and with the members of the consular corps.

The Minister of Finance originates all measures relative to tariffs on imports, excise duties, etc., and issues all reports and statistics relative thereto.

The Minister of Agriculture and Public Works supervises all matters pertaining to the public health, the adulteration or falsification of food products, public works in general, including the equipment of harbors, etc.

The Minister of Railways has to do with all questions relative to transportation by rail, as well as those pertaining to the merchant marine and the Ostend-Dover mail and passenger service.

PUBLICATIONS.

The Minister of Finance issues monthly an official bulletin, furnishing all the particulars of the country's foreign business, and once a year a summary of the commerce of Belgium with all foreign countries for the preceding twelve months.

* Now consul-general.

Every year, the bureau charged with the supervision of the mines publishes statistics concerning matters relating to the mines, quarries, foundries, factories, etc.

The Department of Industry publishes monthly a pamphlet entitled *Revue du Travail*, containing statistics of all kinds pertaining to matters connected with labor

The Minister of Railways publishes yearly the statistics of transportation by rail of all merchandise entering or leaving Belgium.

The Department of the Interior and of Public Instruction furnishes, in the Statistical Year Book of Belgium, all details concerning population, immigration, public instruction, finances, agriculture, industry, and commerce.

SUBSIDIES TO MERCHANT MARINE.

The Belgian Government has abandoned the policy of granting subsidies to the merchant marine, and to-day pays none, except in the case of the North German Lloyd, which receives yearly the sum of 80,000 francs (\$15,440).

The Government has instituted two schools for the study of navigation, one at Antwerp and the other at Ostend. It keeps two boats in commission for the purpose of patrolling the fishing banks, and runs mail boats regularly between Ostend and Dover. For the purpose of facilitating the rapid transport of vegetables, fruits, etc., destined for the London market, the Government has granted certain privileges to the promoters of a steamship line between Ostend and Tilbury.

The before mentioned comprises all the support that the Government can be said to extend directly to the merchant marine; though indirectly, it contributes greatly to its well being by its constant efforts and outlays to render Antwerp the first port of the Continent.

FOREIGN AGENCIES.

Belgium has no other representation in foreign countries than that afforded by the members of its diplomatic and consular corps. The efficiency of the individuals composing the last-named body is generally recognized—a fact due, without doubt, to the methods in vogue in the selection of consuls, the opportunity afforded for making a career in that branch of the public service, and the consequent permanency of employment along familiar lines.

The Minister of Railways, however, has commercial agents under his direction, in certain European cities, whose duties are to use every possible exertion to divert to Antwerp freight destined for outward shipment.

TECHNICAL EDUCATION.

The establishment of technical and industrial schools has been accomplished by private enterprise, and in some cases by the municipal authorities, and not by the Government.

There is at present no Government school of the kind referred to, though it is my understanding that the authorities encourage the establishment of the same. The question as to the policy of adopting a system of apprenticeship in schools has given rise to much discussion.

In Belgium, there exists an unanimity of opinion as regards the policy of enforcing apprenticeship in the workshops, except in cases where a knowledge of the trade concerned can be acquired at school, as in tailoring, upholstering, printing, etc.

There is no law in this country relative to technical and industrial education. Every application made to the Government for a subsidy in aid of a technical school must be accompanied by the evidence necessary to form an estimate as to whether or not the applicant is entitled to the same. Government aid is ordinarily extended in accordance with the following scale:

To schools in which the instruction afforded is wholly theoretical, the grant amounts to one-third of the total expenses, rent and tuition paid by the pupils deducted.

In the case of technical schools, the subsidy amounts to two-fifths of the expenses incurred, rent and tuition paid by pupils deducted.

The number of the schools of the first class mentioned which received aid from the State in the year 1884 was 86 and in 1896 was 376, of which number 225 were schools for training young girls in housekeeping and three lecture courses on technical subjects for girls; there were 23 technical schools, as well as 2 manual-training establishments for the same class. For boys, there were 42 manual-training schools of the apprenticeship order for acquiring a knowledge of the weaving of Flanders, 11 apprenticeship manual-training schools of stone cutting, three courses of technical lectures, 16 technical schools, 40 industrial schools, 6 high schools, and five courses of lectures on commercial and scientific subjects.

In 1884, there existed but one technical school for boys, connected with the industrial school at Tournai. There was established at Brussels in 1885 a school for teaching tailoring; one at Ghent in 1887 for iron and wood workers; one at Brussels in 1888 for teaching printing; one at Liege in the same year for tailoring; one at Ostend in 1888 for the fishing industry; a technical school at Louvain in 1889; one for the fishing industry at Blankenbergh in 1890; for watch making and small instruments of precision at Brussels in

1890; for the fishing industry at Nieuport in 1893; for upholstery and the jewelers' trade at Brussels in 1894; and for the firearms industry at Liege in 1896.

It is a fact generally conceded, that the courses of technical education and manual training afforded by the before-mentioned establishments have stimulated the growth of manufacturing interests, improved the quality of the output of the industry of the country, and tended to increase the export of the same.

GENERAL POLICY.

The economic policy of Belgium, highly protective from the year of its emancipation, in 1831, until 1855, was changed to that of the so-called "tariff-for-revenue-only" system in 1861, and so continued until 1884, when the Government, while disavowing any change of policy, laid an import duty upon cattle and meats. Two years ago, an import duty was imposed on oats, butter, etc.

It was during the period comprised between the years 1867 and 1884 that the great development of Belgian industry took place, leading to the exportation of its products to an extent surprising to the most optimistic.

Naturally, the advocate of the system before mentioned finds in the above-recited facts the relation of cause and effect, and ascribes the success achieved by the manufacturers of the country in the markets of the world to the revenue policy pursued by the Government during the period mentioned.

It goes without saying that, in order to establish the truth of the foregoing proposition, an exhaustive study of the politico-economic conditions prevailing during the same period of time among the other nations of the world is requisite.

Belgium, a highly productive land, situated as it is between the two great protective countries France and Germany, would naturally welcome the removal of every impediment in the way of the free introduction of the fruits of her industry. It is a belief here that, with every barrier to trade removed, her manufacturers could compete successfully with those of any country.

Further than the foregoing, it has not been possible for me to obtain any evidence of the existence of any distinctive policy, rightly named, adopted by the Government for the extension of its foreign trade. As before mentioned, the Government has for years used its best efforts to make Antwerp the leading port of the Continent, and in my opinion the time is rapidly approaching when the first place in rank will be generally conceded to it. Again, the efficiency of the work accomplished by the consular corps of the country has been

generally recognized for years; and the Government, in maintaining the same at the highest point obtainable, has been of the greatest possible service to manufacturers and exporters.

Another very important agency in the development of the foreign trade of Belgium can not be disregarded—the excellence of organization and thoroughness of work of the chambers of commerce of the different cities, particularly Antwerp.

As is well known, this city is not an industrial center, and those occasions for coming in contact with the representatives of any extensive manufacturing interest are rare. Again, the commercial class of this community is largely made up of colonies of German and English residents, in whose hands lies a great part of the export and import business of the port. Owing, in part, to the contiguity of this place to the lands of birth of many of the classes mentioned, the press of these countries exercises influence in forming public sentiment upon commercial subjects, and the opinion expressed upon the commerce of other countries by any of the individuals above referred to would be strongly biased in favor of the land of his birth.

In regard to our country, the feeling is diversified in accordance with the manner in which individual interests are or have been affected by our economic policy. Apparently, the average foreigner resents the idea that our nation should be permitted to legislate in its own interest.

The facts that our Government levies no direct taxes, that the greater part of its income is raised by the collection of duties on imports, and that by the prevailing system the average workingman enjoys a measure of prosperity unknown elsewhere, seem to be wholly ignored.

In this connection, and as evidence of the feeling existing among those whose individual interests have been immediately affected by recent legislation, the following quotation from the annual report of 1896 of the chamber of commerce of Verviers, the center of the woolen-cloth manufacturing interest, accounting for an existing state of depression in that line of business, may be considered interesting:

For a system of relative free trade draconian measures have been again substituted, the influence of which has made itself felt in our exportation of cloths and woollens to the Republic of the North (America).

FRANCE.

Consul-General Gowdy writes from Paris:

I have the honor to transmit herewith a report on the foreign-trade policy of the French Government and the principal agencies, conditions, and efforts contributing to the measure of success in foreign markets achieved by French manufacturers and exporters.

This report has been delayed on account of the difficulty of obtaining accurate information as to the present situation and in learning the regulations as to the merchant marine. I have also been waiting the passage of a bill before the House and Senate, which is referred to as the "Office Nationale du Commerce Extérieure."*

The department of the French Government devoted to the interests of trade is entitled the Ministry of Commerce, Industry, Posts, and Telegraphs. Henry Boucher is Deputy and Minister.

The publications comprise the following subjects: General statistics of France; rules governing interior commerce, arts, and manufactures, stock companies, insurance, commercial schools, industrial expositions, pension and savings banks, work of children in factories, weights and measures, industrial property, tariffs and laws regarding customs duties and treaties of commerce, warehouses and docks, marine fisheries, merchant marine, foreign commerce, commercial information, technical education, and professional syndicates.

BOUNTIES TO SHIPPING.

The French Government being protectionist to an extreme degree, extends remarkable support not only to its commerce, but to its merchant marine. The law now governing the merchant marine and the royalties pertaining thereto is dated the 25th of July, 1893, and was promulgated by its insertion in the *Journal Officiel* of the 27th of July, 1893; and in point of fact, includes the application of the law of January 30, 1893. Formerly, in accordance with the law of January 29, 1881, primes or bounties for building were calculated upon the legal gross gauge of ships, and the bounties for navigation were calculated upon the net gauge.

In order to establish an equality between the old and the new coefficients of these primes or bounties, the new law takes, for its base of calculation, the total gross gauge without any reduction. As in the past, the bounties for shipbuilding are paid by the Minister of Finance. French merchant-marine navigation is divided into

* See CONSULAR REPORTS No. 210 (March, 1898), p. 323, and No. 216 (September, 1898), p. 130.

three classes—long voyages, international coast trading, and French coast trading.

Long voyages are considered those included within the following limits: South, thirtieth degree of north latitude; north, seventy-second degree of north latitude; west, fifteenth degree of longitude from the meridian of Paris; east, the forty-fourth degree of longitude of meridian of Paris.

International coast trading is that included within the limits designated as long voyages, if they take place between French ports, including those of Algeria; also to foreign ports and between foreign ports.

French coast trading is from one French port to another, including ports of Algeria.

As a compensation for the charges imposed by the customs tariff on the construction of ships for sea service, the following rate is allowed, per ton: For steamships or sailing vessels built of iron or steel, 65 francs (\$12.50); for ships built of wood and of 150 tons or more, 40 francs (\$7.72); for ships built of wood and less than 150 tons, 30 francs (\$5.79). The calculation is made upon the gross gauge, conforming with articles 1-12 of the law of May 24, 1873, and article 1 of the law of the 7th of March, 1889.

There is also an allowance in the form of a bonus to French ships of both steamships of wood and iron, as well as sailing ships of wood and iron, varying from 1.10 francs (21 cents) for steamships, diminishing during nineteen years from the date of their construction, to 2 centimes (one-third of a cent) for every 1,000 miles of travel. The yearly decrease for steamships built of wood is 6 centimes (1 cent) and for steamships built of iron or steel 4 centimes (seven-tenths of a cent). For sailing vessels, the bonus is 1.70 francs (33 cents) the first year, decreasing yearly 8 centimes (1½ cents) for wooden ships and 6 centimes for those built of iron and steel. The wooden sailing ships are entitled to a bounty for twenty-two years, and the iron or steel sailing vessels for twenty-nine years.

These calculations are made, as before stated, on the 1,000 miles actually covered by the ship.

BUREAU OF FOREIGN COMMERCE.

I do not know of any agencies maintained at the expense of this Government in other countries for the exploitation of products, but understand that there has been some proposition to establish such a system in Russia. The House and Senate have been considering the establishment of an "Office Nationale du Commerce Extérieure" (Office of Foreign Commerce), as an adjunct to the Ministry of Commerce, Industry, Posts, and Telegraphs. One of its principal

objects will be to furnish to French merchants and manufacturers commercial information of every nature which can assist in the development of exterior commerce and in the extension of new markets in foreign countries, as well as in French colonies and protectorates.

According to the terms of the bill, the Ministry of Commerce and Industry grants an annual subvention of 70,000 francs (\$13,510). The chamber of commerce of Paris gives the free occupancy of a building which it has had built, No. 3 rue Feydeau, to the staff connected with this organization, as well as the privilege of consulting its commercial library. In order to cover any shortage in the yearly expenses, the bill authorized the chamber of commerce to increase by a fourth of a centime the taxes on licenses within its jurisdiction. This national office of foreign commerce is to be considered a public institution. It can receive subsidies, gifts, and legacies of any kind from public administrations, from chambers of commerce, syndical associations, or from individuals. The accounts will be under the supervision of, and subject to, the same rules as those of the chamber of commerce. The institution will correspond with diplomatic and consular agents and with colonial officers through the competent ministers. It will correspond directly with chambers of commerce, with the consulting chambers of arts and manufactures of the metropolis, and with the French chambers of commerce abroad.

With a view to making more complete the commercial information from diplomatic, consular, or other sources, the Minister of Commerce will name official correspondents among French manufacturers and merchants, either at Paris or in the colonies, who are well informed in the business of importation and exportation. Such correspondents will have the honorary title of "Conseillers du Commerce Extérieure." They will be named for a period of five years, which may be renewed, and their services will be gratuitous.

The organization of this institution, and the permanent control of the service, will be under the auspices of a board of administration named by the Minister of Commerce, and under whose presidency it will act, composed as follows: The president of the chamber of commerce, Paris, first vice-president; seven presidents of chambers of commerce from the departments; six members of the chamber of commerce, indicated by that organization; two presidents of commercial syndical unions of Paris or the departments; two councilors of foreign commerce; the director of the Ministry of Commerce, Industry, Posts, and Telegraphs; the director-general of customs at the Ministry of Finance; the director of consulates and commercial affairs at the Ministry of Foreign Affairs; the secretary-general or the director of the Ministry of Colonies; the director of agriculture

at the Ministry of Agriculture; the director of railways at the Ministry of Public Works; a director; the chief of the third office of the direction of commerce, the secretary of said officer, and consulting secretaries.

The daily business will be transacted by a committee of direction composed as follows: The president of the chamber of commerce of Paris, president; five presidents of the chambers of commerce of the departments, designated by the board of administration; three members of the chamber of commerce, designated by the chamber; a director; secretary of the director, who will fulfill the duties of the secretary of the board of direction.

The board of administration will meet at least once every three months to hear the report of the directory committee as to the working of the office and decide upon all questions relating to the improved working of the same. The committee of direction will meet twice a month at least, and at any time that necessity may require. It will examine the reports of the director as to the work being done, and will pass upon any measures to be taken as to the working of the office. It will make up the annual budget, which, after approval by the chamber of commerce and the board of administration, will be submitted to the Minister of Commerce.

The organization is also authorized to take charge of the printing, publication, and sale of the *Moniteur Officiel du Commerce*, either in its present form or after alterations made by the committee of direction.

TECHNICAL EDUCATION.

Technical education has probably received more attention in France than in any other country, with the exception, perhaps, of Germany. It exists in the city of Paris in all classes of industry where skilled labor is required, and even in lines where it is not required. The *chambres syndicales* existing throughout France, representing every class of commerce and manufactures, have felt themselves sufficiently interested, where Government subsidies were not forthcoming, to organize and sustain technical schools for the manufacture of goods or articles in their particular lines.

Outside of Paris, in cities renowned for a particular production, there are almost invariably one or more technical schools for the education of young men and women, to maintain the standard of work of their predecessors. In many cases, these technical schools have received substantial aid from Government appropriation.

STATE AID TO TRADE.

There is no question as to the beneficial influence and the stimulus produced upon technical schools and industries by the action of the Government. If the products are inferior to those produced by

other countries, the fact is promptly known to the Government; and its agents lose no time in communicating the fact where French goods in competition are being manufactured. It is well-known that French goods emanating from reliable sources are rarely, if ever, found to be of inferior quality or workmanship.

The distinctive policy of the Government for the development of trade is clearly outlined by the chairman of the committee, Mr. Monestier, senator, reporting on the bill for the establishment of an office for exterior commerce. He referred therein to words used by the President of the Republic, in an address made a short time ago before the highest officials of commerce and industry, to the effect that "they should undertake the conquest of new markets and make known to all peoples and to those awakening to civilization the abundant genius of the industrious French race." Mr. Monestier approved of these wise exhortations, which he considered should cause renewed efforts, in order to insure to the French nation the place which it had a right to claim in the world's market.

Although the existing United States tariff is a cause of great complaint to the French, their tariff is in many cases absolutely prohibitive to American products or goods. Any increase in the United States tariff on articles exported from France to the United States is quickly noted and is met by an immediate increase on something of importance to the United States.

The French nation twenty-five years ago was fairly wrapped up in itself, favored by the patronage of foreigners, with a ready sale for all its manufactures. Efforts for the extension of commercial relations abroad were comparatively neglected. The war events which followed shortly after, in 1870 and 1871, practically brought the export business of France to a standstill; but since that time, increased efforts are being made continually, as a result of the realization that France is not the only country to manufacture the goods in which it has been heretofore considered to control the market. The Government at the present time appreciates the efforts that must be made in commercial competition, and is prompt to encourage and subsidize organizations for technical education and foreign trade.

As stated above, I am persuaded that French industrial and commercial circles are at last beginning to realize that other countries can manufacture articles equal, if not superior, to their own, and can even, in some cases, place them upon the French market. I know personally that French manufacturers in some lines have admitted that American products entering France have ruined their business.

GERMANY.

The following was received from the late consul-general at Berlin, Mr. Julius Goldschmidt:

The German Imperial Government has in its Department of State a separate commercial-policy division (*Handelspolitische Abtheilung*), not, however, connected with the supervision of industrial development. The separate States composing the German Empire have departments for the latter purpose, which, jointly with the first-named department, assist in furnishing the imperial statistical bureau (*Kaiserliches Statistisches Amt*) in Berlin with all statistics belonging to their several branches.

Thus the scope of statistics furnished by the imperial statistical bureau is a wide one, covering the questions of area, population and its occupations, forestry, agriculture, mining and smelting, the chief industrial branches, patents, railways, commercial marine, foreign commerce, finance, insurance, military and colonial information, meteorological observations, and, in fact, everything of interest to the Government. The reports are monthly, quarterly, and annual. The annuals are composed chiefly of compactly arranged tables, reducing the entire experience of the year as much as possible to round numbers for quick and convenient general information, and bears the name of *Statistisches Jahrbuch für das Deutsche Reich*.

MERCHANT MARINE.

Government support may be divided into two kinds—direct and indirect. The direct support consists of the subventions allowed two of the great lines, that to eastern Asia and Australia receiving 4,090,000 marks (\$957,000) and that to East Africa 900,000 marks (\$210,600) yearly.

Under indirect support, may be mentioned remuneration for carrying the mails and a system whereby the officers and petty officers of the merchant marine become reserve officers of the regular navy, which has a most excellent effect on the morale of the service. Here, too, may be mentioned the encouragement extended by the Emperor to the great lines, illustrated by his readiness to be present at launchings, etc. This is of much greater importance in Germany than it would be in many other countries.

FOREIGN AGENCIES.

The only regular agents established by Germany in foreign countries are five agricultural experts or attachés, one of whom covers the field of Russia, one France, the third Great Britain, the fourth the

United States, and the last the Danube countries, with residence at Vienna. The institution of these experts was an experiment; but so satisfactory were the results, that the corps has been made permanent. Of distinctly commercial attachés, such as Great Britain and Russia possess, Germany has none. The consuls throughout the world are expected, like our own, to study their respective fields and to furnish the Government with information concerning the state of trade there, and suggestions as to the policy that might best be adopted by the German Government and private firms. This year for the first time the Imperial Diet has voted a sum, rather small for the purpose involved, towards sending industrial commissions to eastern Asia to discover new fields for the exploitation of German manufactures. The immediate cause of the appointment of this commission was undoubtedly the desire to find a new market to make up for the comparative loss of the American market, which, it was feared, was spoiled by the present tariff law. That these fears were to a great extent unfounded is becoming more and more apparent. The appointment of other industrial commissions by the German Government will depend upon the success of that to eastern Asia.

The Government has no warehouses on foreign soil. Its participation in world's expositions has, however, been regular, and, as explained below, has been a powerful instrument in the great improvement and growth of German industries. Germany is now making extraordinary efforts to make her exhibit at the Paris exposition in 1900 magnificent in every way, and it may be confidently expected that the remarkable improvement made between the expositions at Philadelphia and Chicago was not greater than that which German industries will show at Paris over the Chicago record.

TECHNICAL EDUCATION.

This is a most important question, in that the great improvement in the quality of German manufactures, noted several times in this report, are to no small extent due to the fine technical schools of Germany.

Of technical high schools, Prussia has three, viz, in Berlin, Hanover, and Aix la Chapelle; Saxony, one, in Dresden; Hesse, one, in Darmstadt; Bavaria, one, in Munich; Wurttemberg, one, in Stuttgart; Baden, one, in Karlsruhe—which are all supported by their respective State governments.

Under such mental and manual training, with steadily improving machinery, a class of highly intelligent workmen has been developed which in their several lines are nowhere surpassed, if equaled. This is true to such an extent that a commission of Englishmen,

which had been sent to Germany to inspect and report on German industry, lately delivered a report at Manchester in which they stated that, compared with these intelligent, skillful, and frugal German workmen, the English factory hands were like "semi-savages"—a rather severe statement.

To show what moderate expenditures bring these results, an extract is here given from the Prussian Reichshaushalts Etat. Of the total State expenditures, which average 2,000,000,000 marks (\$476,000,000) a year, the expenditures for the three large technical high schools of the State average \$100,000 a year, viz, 339,500 marks for 1896 and 467,000 marks for 1897, the latter sum having been lately appropriated. An itemized extract is given for reference:

Prussian State appropriations for permanent investment in technical high schools.

Description.	Amount.	
1896.		
	Marks.	
Additional for electro-technical laboratory, Berlin	30,000	\$7,140
Instruments and apparatus for physics. plates, and models, Berlin.....	7,000	1,666
Building and furnishing an engineer laboratory, Berlin.....	115,000	27,370
Instruments, etc., for institute for physics for Hanover.....	5,000	1,190
Plates, models, etc., for study of geology, mining, and mineralogy, Hanover....	2,000	476
Apparatus for organic chemistry laboratory, Hanover.....	2,500	595
Building and furnishing an engineer laboratory, Hanover.....	70,800	16,850
Arranging new apparatus for putting out fires, Aix la Chapelle.....	5,200	1,238
Models for railroad signal service for Aix la Chapelle.....	2,000	476
Enlargement of the technical high school, Aix la Chapelle.....	100,000	23,800
Total.....	339,500	80,801
1897.		
Machinery outfit of engineer laboratory, Berlin.....	88,900	21,158
Addition to material for teaching hydrantic and hydrostatics, Berlin.....	3,000	714
Improved lighting of machinery hall of the mechanic-technical experimental room, Berlin.....	2,000	476
Additional arrangements for metal building material and paper testing, Berlin...	21,800	5,188
Enlargement of the electro-technical institute and improvement of machinery, Berlin.....	171,000	40,698
Building of large lecture hall for experimental physics, etc., Berlin.....	64,000	15,232
Furnishing rooms for lectures on physical chemistry, Hanover.....	4,500	1,071
Additional for engineer laboratory, Hanover.....	32,400	7,711
Improvement in lighting some of the lecture rooms, Hanover.....	3,400	809
Rearrangement of geological and pantiological collection, Aix la Chapelle.....	1,500	357
Building and furnishing engineer laboratory, Aix la Chapelle.....	74,500	17,731
Total.....	467,000	111,146

The salaries paid annually to professors, teachers, and employees in the three technical high schools are about 1,000,000 marks (\$238,000), mostly covered by tuition fees paid by the students.

The schools outside Prussia receive proportionately about the same amount of aid. Besides the regular scientific technological high schools, there are many trade schools and industrial-art schools (Kunstgewerbeschulen) which are for the greater part supported by

the separate State or municipal governments. The great industrial-art schools at Nuremberg and Munich may be cited. Wood carving, metal work, general decoration, and many other branches are taught. The new building at Nuremberg cost about \$230,000; the museum at Stuttgart, about \$1,000,000; the technical high school at Charlottenburg, in the neighborhood of Berlin, \$2,250,000. Among other technical and trade schools, may be mentioned the new electro-technical school at Hanover, opened two years ago by the Minister of Education; the weaving and dyeing school at Crefeld, which is constantly being enlarged to meet the demands of the increased number of students and the advancement of science; the weaving and dyeing schools at Aix and Cottbus; and the other technical institutes mentioned above.

RESULTS OF TECHNICAL EDUCATION.

The establishment and constant improvement of these technical and trade schools have revolutionized the scientific industries of Germany, which have outstripped even those of Great Britain and France. The workman in Germany is now in most cases a scientifically, as well as a practically, educated man, and the result is that his handiwork has improved a hundredfold. The great increase in the amount of German exports in this field can be ascribed in a large degree to the technical and trade schools, which have, in fact, made Germany in a manufacturing sense what she is.

GENERAL TRADE POLICY.

It can hardly be said that the General Government has for years followed any special or distinctive policy for the development of foreign trade, beyond what the government of any commercial nation does; such as having an intelligent and reliable corps of consular representatives in the countries traded with, and taking an active part in all large expositions the world over and sending the best tried men for the purpose of superintending the German part of such exposition. Apart from this, much of the success of Germany in competing for the world's commerce may be attributed to the intimate cooperation with the Government of the boards of trade, chambers of commerce, merchants' associations, and similar bodies, in all matters concerning foreign commerce. No important step is taken by either in this direction without careful consultation. In this manner also, the Government, through its Handelspolitische Abtheilung of the State Department, before mentioned, continues in closest touch with the commercial interests of the Empire.

It may be also mentioned that the Government pays moderate

bounties to the manufacturers of sugar, alcohol, cocoa, and some oil products. Of these articles however, sugar is the only one which enters largely into the export trade.

CHANGES OF POLICY.

The foreign-trade policy of the General Government had hardly commenced to develop twenty-five years ago, if it can be said that it existed at all. The war with France had terminated favorably beyond the highest expectations. The enormous war indemnity scattered gold broadcast all over the German Empire, and encouraged speculation rather than industry. Germany was intoxicated with unnatural prosperity, which reached its climax and crash in 1873. There followed a protracted "sobering-down" process, during which industrial Germany was in a sad condition; so that when the attempt was made at something of an exhibit at Philadelphia in 1876, the director of the Berlin-Charlottenburg Technical High School, Professor Reuleoux, upon his return, reported German manufactures in comparison with those of other countries, cheap and poor in quality, which gave rise to the expression "cheap and shabby" and brought down upon his honest head fierce criticism by the German press. But the German manufacturers who had visited Philadelphia felt the truth of Professor Reuleoux's judgment, and his words proved the sharpest spur for renewed efforts to the better. Not only in Germany, but the world over, had 1873 caused fearful losses and great depression. Germany in 1875 showed a population of 42,727,360 to 540,596 square kilometers, or 79 to the square kilometer,* against 41,058,804 in 1871—a steadily gaining rate of increase; so that with comparatively light emigration the number rose in 1885 to 46,855,704, or 86.4 to the square kilometer, and in 1895 to 52,279,901, or 96.7 to the square kilometer. The population is now considered to equal 100 to the square kilometer, or over 250 to the English square mile.

During this increase to the square mile, it became from year to year a question of vital interest to consider the industries of the country and to make Germany the workshop of the less populated parts of the globe, with a view of keeping the people from emigrating, and thus maintaining military strength.

The several State governments made appropriation for building and improving technical schools, manual-training schools, and technical high schools of the best order. Merchants' and manufacturers' associations were formed everywhere, even in smaller cities.

Meanwhile, the General Government set the best heads to work on the tariff question, and after careful study of the needs of the Government, as well as those of commerce with outside nations, to-

* 1 square kilometer = 0.386 square mile.

gether with home demands and home production, with its possibilities of increase for export, a tariff bill was formed which for simplicity and for an even distribution of justice has probably no equal and surely no superior. It has proved to be what was intended—a benefit to the whole nation; yet in making it, many sharp corners had to be carefully rounded. It became a law in 1879 and has received no material changes since, and under it favorable commercial treaties have been concluded with other nations.

Since Germany, with its large population compared with its food-producing area, must be more a manufacturing than an agricultural nation, the law favored the farmer only so far as not to ruin agriculture in this country, where land is very dear; and of late years, many of the larger agriculturists have become manufacturers on their own estates, being encouraged thereto by moderate State bounties.

One main principle in the tariff law is that the raw material used in Germany in excess of home production is admitted free when the articles manufactured therefrom enter largely into the export list.

HOW FOREIGN COMPETITION IS REGARDED.

The sentiment in industrial circles, as natural from above causes, is one of faith in the ability of Germany to continue competing successfully for foreign commerce. There is a firm conviction that by steadfast effort, training, and perseverance, new ground will be gained rather than old ground lost, since intelligence, skill, diligence, and economy are great aids toward success in the race of nations, as well as of individuals.

The progress in many of the leading branches of manufactures which has taken place in the German Empire during the last decade is wonderful. Germany is making enormous strides, notably in those manufactures in which superior knowledge, technical skill, and the agency of the expert in chemistry or other sciences can be brought to bear. This is true to a remarkable degree in the electrical trades and in the cognate branches of electrical engineering, as also in manufacture of colors and in various applications of printing, involving artistic and scientific skill.

SUMMARY.

From the above, it appears that it is not so much the assistance of the General Government to the industries in Germany which has caused the remarkable progress made, as the educational conditions, upon which Germany has relied so largely for the maintenance and development of her industries. However, she does not remain satisfied with past achievements. There is a determination on the part of the municipalities and States to increase and extend their schools

and to equip them with the most modern and improved apparatus. In many towns of this Empire, will be found evidence of a remarkable development of educational institutions, and all aids to industry that education can provide. The Germans seem to attach greater importance than ever to high scientific training in the development of the manufacturing industry.

Moreover, modern languages are widely taught, with results of the greatest possible benefit to the German clerk and commercial agent, who, in general, have superior training. I am convinced that the nation which has the best educational facilities is best prepared for the great industrial warfare which lies before us. The great industries of to-day depend more and more upon the successful application of recent discoveries to ordinary manufacturing processes, and less and less upon national resources.

The best assistance that can be extended by any government does not consist of subsidies in cash, but of endeavor to improve and to develop industrial and technical educational facilities. These schools should be adapted to our peculiar conditions, and care must be taken to maintain them at least on a level with those of other nations of the world.

GREAT BRITAIN.

Consul-General Osborne, of London, says:

I transmit the report called for in instruction of September 27, 1897, on the foreign-trade policy of the Government of the British Empire. I think it is only right to say that in the preparation of this report I have received valuable assistance from Mr. L. A. Lathrope, United States consul at Bristol, who, through his recent indirect connection with the Department of Agriculture, has made some study of the matters under discussion.

HISTORICAL.

In dealing with this subject, a word or two of retrospect is almost necessary. In the beginning of the present century, Great Britain was practically an agricultural country. The discovery and enlarged production of coal and iron and the invention of manufacturing machinery inaugurated new conditions, which, in the course of a century, have transferred the people from the fields and the farms to the towns, to exercise there their energies and abilities in supplying the world with manufactured products, for which payment has largely been made in food. With fewer than 2,000,000 acres seeded to wheat each year, and with an annual product of 60,000,000 bushels only, Great Britain is now dependent on over-sea countries for

nearly 200,000,000 bushels of the chief cereal, and for other means of subsistence in like proportion. Such conditions are unique in the history of nations, and are a just cause of apprehension to the British people. They are the result, primarily, of natural causes, and, secondarily, of the policy of the British Government in respect of foreign commerce.

This policy has been consistent and progressive, during this century of altered circumstances, in adapting itself to the unique conditions—conditions which can not be repeated—for no country can henceforth enjoy, what England for many years possessed, a monopoly as the workshop of the world. It was to be her business during the nineteenth century to manufacture and distribute her own raw products and those of other countries. It was early perceived that to do this with the greatest measure of success, the raw materials must be brought to her shores with the utmost possible economy and with the fewest possible restrictions; that the food for her operatives must be cheap; and that ships must be free to come and go, unhampered by vexatious laws and regulations.

These ideas were utterly subversive of the drastic commercial theories of the eighteenth century, whose final year saw upon the statute books of England upwards of a thousand laws shackling trade in every direction. There was absolute prohibition of commerce with certain continental countries, absolute prohibition of commerce in certain commodities, and certain branches of over-sea trade were limited to certain classes of ships. The new ideas found expression first in 1820, in the celebrated petition of the London merchants to the then existing administration, asking that every restriction on trade, including all protective duties, might be removed. This petition marks the date of the beginning of the modern policy of England, and by slow degrees the desires of the petitioners were completely realized. In 1846, the sliding scale of duties upon imported grain was abolished, and cereals were thenceforth free; in 1849, the remnants of the drastic navigation laws of Charles II were swept away; in 1861, an act was passed liberating ships from many oppressive charges; and the celebrated budget of 1860 abolished the duties on manufactures and imposed an income tax. Free trade was now an accomplished fact.

The Foreign Office also took up the task of securing open markets in other countries. Between 1851 and 1860, no fewer than sixteen treaties of commerce were negotiated, some of them—notably that with France, concluded in 1860—of great importance and far-reaching effect. Up to this time, British trade with France had been small in volume, and many articles were absolutely prohibited; but by this treaty, all prohibitions were removed, French duties were

materially reduced, and corresponding concessions made in England. As this treaty contained the usual "most-favored-nation clause," all countries participated, and a considerable relaxation of continental policies followed—a relaxation, however, not destined to be permanent.

The Foreign Office, about this time, was also very active in the Orient. A commercial foothold in Siam was obtained in 1855 through the treaty of Sir John Bouring, in Japan in 1858 through Lord Elgin's treaty, and in China in 1860. It is admitted, I believe, by the best English opinion, that the Chinese wars of 1842 and 1857 were not justified; but the fact remains that the ardor of the Foreign Office and the navy department in behalf of commerce, whether in this case exercised with due consideration or not, resulted in giving ing to England a commercial supremacy in China.

POLICY OF FOREIGN OFFICE.

In the forty years that have elapsed since the making of these treaties, the British Foreign Office, notwithstanding the constant and harassing distractions of an intricate diplomacy, has never neglected its obligations to its country's foreign commerce. It would not, perhaps, be too much to say that the guiding principles of its policy have been the maintenance, unimpaired and unmenaced, of its over-sea possessions and dependencies, and the protection and preservation and encouragement of its over-sea trade. It is in close touch with the commercial sentiment of the country, which usually finds a concrete expression in the resolutions and petitions formulated by the executive council of the associated chambers of commerce. At the annual meeting of this council, held in 1898, a resolution was passed to this effect:

The executive council desire to record their full appreciation of the efforts of the Foreign Office to assist, in every practicable way, the development of British trade abroad.

A paragraph in the report of this 1898 meeting will illustrate one of the directions of the efforts of the Foreign Office:

During the year, the executive council have received from the Foreign Office numerous copies of consular reports respecting conditions of trade and the opportunities for developing new markets. In many instances, samples of goods have been forwarded to the association. These samples have been circulated, and it is believed that the effect has been most beneficial in illustrating the actual nature of the competition for foreign trade.

This paragraph is evidence that the activity of the Foreign Office in this particular direction has been intelligently exercised, and that the results are satisfactory to those most qualified to judge. I may add that it is the practice to issue the consular reports above referred

to as separate leaflets or pamphlets; that a certain number are issued to representative bodies free of charge; and that a nominal charge, covering the cost of paper and printing, is made for the remainder. Stimulated to some extent, I am bound to believe, by United States activity in this direction, the number and quality of these reports have been much increased and enhanced of late years, and they are regarded by the trading community as valuable contributions to knowledge.

FOREIGN COMMERCIAL ATTACHÉS.

The Foreign Office also maintains commercial attachés at important continental centers. These officials have the usual diplomatic status, and have no duties to perform except such as are implied in their title. One such official is stationed at Paris; his ground includes France, Belgium, and Switzerland. Another at Berlin covers Germany, the Netherlands, and Scandinavia. The Madrid officer is responsible for Spain and Portugal, and the attaché at St. Petersburg for Russia. Commercial pressure has been brought to bear upon the Colonial Office to send officials having similar functions to each of the more important colonies, and the matter is now under consideration. In China and South America, consuls are sometimes detached from their posts and directed to make reports covering special industries or "newly opened territory." The British consul at Canton, for instance, was requested not long ago to report on the trade possibilities in connection with Korea, Formosa, and the Philippines.

BOARD OF TRADE.

I turn now to the consideration of the relations of the British Board of Trade to British foreign commerce. The limits of the duties and activities of this great Government department, it is unnecessary, perhaps impossible, to define. Suffice it to say that its marine department exercises that jurisdiction over British shipping that with us is exercised by the Treasury Department, and that it has important duties in connection with domestic finance, commerce, and transportation, with corporations and railroads. Its functions bring it into contact at many points with foreign trade, and it sometimes appears to overlap the borders of the Foreign Office. It is only this year, for instance, that the Board of Trade sent a Government commissioner to South America to make a special inquiry into the conditions and prospects of trade there. I do not think that serious difficulties arise, in practice, from confusion between departments as to their responsibilities in regard to foreign trade. In fact, the Board of Trade, the Foreign Office, the Colonial Office (and, to a lesser extent, the India Office and the Treasury) are constantly

occupied about matters of foreign commerce. This necessary condition of affairs accounts for the apparent anomaly that the nation, having at present the largest volume of foreign commerce of any country, has no Government department of foreign commerce. Twenty years ago, there was some desire for such a department, and the Associated Chambers of Commerce were in the habit of passing an annual resolution asking for it; but such a resolution does not appear in the records of their meetings for at least fifteen years back. No doubt, the desire has been dissipated to some extent by the extreme alertness of the already existing departments. If the Foreign Office is pressed to appoint an additional commercial attaché, the suggestion is immediately considered, and, if not accepted, controlling reasons given therefor; if it be discovered that favored-nation treatment is no longer enjoyed by England—as recently in the case of Portugal—the Foreign Office is immediately at work. If the Foreign and Colonial offices are pressed to construct a new trade route through Burma into China, to build a railroad to Uganda, to construct light railways in South Africa, the demands are immediately considered; refused for the moment in the first case, granted in the second and third. No doubt, political considerations enter into the question of construction of African railroads, but the end is the same—the providing of homes under the British flag for the surplus population of England, who shall ultimately be purchasers of the surplus products of the Mother Country.

PUBLICATIONS.

The Board of Trade is the statistical department. It issues each month a return of trade and navigation. Owing to the short distances of the United Kingdom and to the simplicity of the tariff, these returns (admirably full and conveniently arranged, showing the different commodities exported to and imported from each foreign country) are issued with extreme promptitude. Voluminous annual statistics are also issued, a list of the principal of which is given in Appendix D; and there is a monthly publication known as the Board of Trade Journal. This publication is sold for 12 cents, and contains information of a nature similar to that in our CONSULAR REPORTS. It gets its information wherever it can; reprints consular reports either in their entirety or in such compressed or extracted form as may illustrate the particular subject dealt with; contains notices of tariff changes, etc. I may mention that hardly a number of this journal is issued that does not reprint one, two, or three of the reports of our consuls to the United States Government. Appendix E gives a contents bill of a late number of the journal. The Board of Trade Journal is characterized by one very strange feature—it

contains many trade advertisements. So, also, does the similar journal issued by the Board of Agriculture. This appears to me to be an unfair competition of Government with private enterprise; but, on expressing this view to a British official, I was assured that these journals would never see the light unless they were made self-supporting in this way. Protests have been made from time to time by the trade papers, but they have been unheeded.

It may be said of British statistics, on the whole, that they are admirable in fullness and clear in arrangement. I do not think that we have anything to learn from them either in copiousness, promptitude of issue, clearness of statement, or excellence of arrangement. It appears to me advisable, however, in view of the commanding and practical importance of statistics in the present day, that we should be represented in the International Statistical Institute. The annual meeting was held last year in St. Petersburg, and the British Government was represented by two official delegates, one of whom was a Board of Trade official.

We have seen above that the efforts of the Foreign Office in behalf of foreign trade have met the approval of the mercantile community. The council of the Associated Chambers of Commerce spoke last month as follows, with reference to the Board of Trade:

The council avail themselves of this opportunity to state that the commercial community recognizes on this, as on many other occasions, the constant and growing desire of the Board of Trade to improve the means of collecting and disseminating commercial information, so as to be of practical value to British manufacturers and merchants.

UTILIZATION OF CONSULAR SERVICE.

The views and intentions of the Board of Trade may be clearly seen in the following letter written by its president, Mr. Ritchie:

BOARD OF TRADE,

Whitehall Gardens, S. W., June 29, 1897.

DEAR SIR STAFFORD NORTHCOTE: I feel sure that I may rely upon your assistance in the following matter, which, it seems to me, is one of very considerable importance to the trade and commerce of the country.

As I have previously informally intimated to you, the Board of Trade have for some time had under consideration the question whether any, and, if so, what, assistance could usefully be given by the State to British traders in their competition with foreigners.

Although careful statistical examination rather tends to show that the effect of this competition has been exaggerated in some quarters, there can, I think, be no doubt that it has become increasingly keen in recent years, and that it is necessary (in view of the growing strength and rapidly developing activity of commercial enterprise abroad) that every effort should be made by the State to at least collect and disseminate among traders in this country full and accurate information with regard to the conditions under which trade is carried on by their foreign competitors.

Such information ought to include, among other things, particulars of dues levied on goods, the cost of transit, the description of goods likely to be in demand, the character of the goods now in use—whether of local manufacture or supplied by competing foreigners—their cost of production and the price at which they are put on the market, the terms of credit, and other similar particulars which will readily occur to you.

As you are aware, the Colonial Office has recently obtained and handed to the London Chamber of Commerce samples of foreign goods which there is reason to suppose may have displaced, or be likely to displace, British goods in certain colonial markets. This experiment might possibly later on be developed and extended in the direction of the establishment of a central bureau at which full information in regard to trade circumstances of foreign and colonial markets might be collected by Government officers and made readily available for the use of manufacturers and merchants.

It has been decided, as a preliminary step, to appoint a committee consisting of representatives of the Treasury, the Foreign and Colonial offices, the Board of Trade, and (if they will agree) the Association of Chambers of Commerce, with the following reference:

"To consider and advise as to the best means of bringing to the knowledge of the home trades the information furnished by consuls and commercial attachés and by agents general and other representatives of colonial governments and of India, as to the supply and demand and other conditions of the markets in their respective districts, and as to the opportunities which they afford for the introduction and development of British trade.

"Also to report whether it is, in their opinion, desirable that consuls and agents should be instructed to remit home from time to time samples of goods most in demand in markets, and, if they shall be of that opinion, to advise what (if any) arrangement should be made for the exhibition of such samples in London or for their circulation, with the aid of chambers of commerce, to the provincial trade centers, with information as to price and other conditions under which they are supplied."

The departments I have mentioned are willing to cooperate in this matter and to nominate representatives, and I shall be glad to hear from you at your early convenience whether the proposal to appoint a committee commends itself to your judgment, and whether your association would be prepared to nominate a gentleman to act as its representative.

Yours very truly,

C. T. RITCHIE.

The above letter resulted in the appointment of a committee which includes Government experts and commercial representatives, and a mass of information has been collected, which has not as yet been arranged and digested.*

* The committee reported in July, 1898, recommending the establishment of a commercial intelligence office by the Government, and also the sending of experts to the colonies, at stated intervals, to mark the developments of trade. The commercial intelligence office would send special missions to foreign countries; procure special reports upon particular trades or industries; collect and exhibit samples and patterns; supply information in regard to foreign and colonial tariffs, excise duties, port dues, charges on shipping, changes in tariff classifications, customs regulations, consular fees, forms of certificates of origin required by foreign governments, foreign weights and measures, currency changes, freight and insurance rates, regulations concerning commercial travelers, credits, trading licenses, foreign contracts, shipping subsidies, means of communications, bounties, yield of crops abroad, and new openings for trades or industries. The committee also suggested that the Board of Trade Journal be issued more frequently.

GOVERNMENT AID TO TRADE.

It will be noticed that Mr. Ritchie's letter states that the Board of Trade is considering "whether any, and, if so, what, assistance could usefully be given by the State to British trades in their competition with foreigners." There is an implication here that the question is a new one, and that State aid has been lacking in the past. What is really meant, of course, is that the time has come to systematize and enlarge the aid already given. That such aid has been rendered in a somewhat haphazard manner, there is no doubt; that the idea of rendering aid at all is comparatively new, is also true. British foreign trade has been built up by private energy, and up to the last few years all that it has asked of the State is to make it as free and as safe as possible. Now, it asks direct and practical aid; asks, in fact, that the Government shall do for it in the future what it has done for itself in the past; that the State shall inform it of those openings and opportunities in foreign countries which it has heretofore been content to find for itself. It will be worth while to consider the reasons which have led to this change of view.

FOREIGN COMPETITION.

On the 13th of May, 1898, Mr. Chamberlain, secretary to the Colonial Office, made a speech to his constituents in Birmingham in which was this sentence:

You must all recognize that there is, and there has been for some time past, a combined assault by the nations of the world upon the commercial supremacy of this country; and if that assault were successful, our existence would be menaced in a way in which it has never been threatened since the time of the great Napoleon.

This somewhat rhetorical way of saying that Great Britain has now met active and somewhat successful competition in her export trade sums up in a sentence the reasons for the demand that the State shall quicken its activities. England recognizes fully and admits frankly that henceforth it must utilize every means of holding its foreign markets. It admits that Germany and the United States have attained positions as foreign traders of such actual and prospective importance as to cause grave concern. Mr. Chamberlain's utterance above quoted, coming as it does from the only member of the British cabinet who has had practical experience in commerce, is sufficient evidence of this anxiety; but I might multiply proofs indefinitely. Mr. Gastrell, British commercial attaché at Berlin, says in a recent report:

If we wish to retain our position as the greatest commercial nation in the world, we shall now have a hard fight before us. Our overwhelming supremacy, commercially and industrially, is not the assured fact it once was. We are no longer in that enviable position of former days, when we had no serious competitors in the world's markets for our manufactured products.

Mr. Gastrell in these sentences voices the general opinion of the British trading community. It is not within the scope of this report to go much into statistics, but a few figures may be presented, that we may gather on what ground the British trader is basing his utterances. The foreign trade of the United Kingdom reached high watermark in that year of world-wide activity, 1890, the figures being \$3,645,000,000, of which \$1,282,300,000 was represented by British produce and manufactures exported, an excess of \$75,000,000 over any previous year. In the following years of depression, figures fell much below this great total. They recovered in 1896 to \$3,591,500,000, but exports of British produce and manufactures did not recover in proportion, amounting to \$1,167,000,000. In 1897, the net decrease in exports, as compared with the previous year, was about \$28,000,000, there being in the export of yarns and textile fabrics alone the striking decrease of \$40,000,000—to some extent, no doubt, accounted for by the new United States tariff. In April, 1898, as compared with April, 1897, the falling off in exports exceeded \$10,000,000, and the first four months of this year, as compared with a corresponding period of last year, show a decrease of nearly \$19,000,000.

It will be clearly seen that these continued and persistent reductions are of very serious import, and, so far as last year is concerned at any rate, they occur at a time when figures are expanding in other directions. What is equally serious, they occur at a time when the continental statistics are indicating a steady and increasing export trade from the principal countries.

It appears from a report of Mr. Gastrell that such exports, comparing the year 1885 with the year 1894, increased in a large ratio, as, for instance: From Holland, $24\frac{3}{4}$ per cent; from Russia, 27 per cent; from Austria-Hungary, 18 per cent; from German Empire, $3\frac{1}{2}$ per cent; from Denmark, 67 per cent; from Belgium, $8\frac{1}{2}$ per cent; from Italy, 8 per cent (including silver bullion); from Norway, 26 per cent; from Great Britain, $1\frac{1}{4}$ per cent.

Commenting on these figures and others, Mr. Gastrell says:

In improved net value (*i. e.*, increase of domestic products exported, comparing 1885 with 1894), the United Kingdom can only show a sum of \$13,350,000 for the ten years, and merely holds, in 1894, an eighth place in importance in this respect on the European list. Above her we find Holland, with \$90,600,000; Russia, with \$80,000,000; Austria-Hungary, with \$50,000,000; the German Empire, with \$24,900,000; Denmark, with \$24,000,000; Belgium, with \$20,200,000; and Italy, with \$14,800,000. These figures are sufficient to warrant anxiety; but when we find that our percentage of improvement is only $1\frac{1}{4}$ per cent in the decade, or lower than that of nine European nations, I think that this central fact alone is sufficient to justify the demand of the British public that the whole question of our trade abroad, and of foreign competition, shall be the subject of thorough investigation.

It is such statistics as those presented above that justify Mr. Chamberlain's assertion that there is a combined assault upon the commerce of England, and that have moved the public demand for, and official acquiescence in, enlarged State activity on behalf of trade.

The comparatively small increase above noted in German trade may be thought to hardly justify the eager interest of England; but the German increase is in a class of goods and in territory directly competing with England. "In the East," says Mr. Gastrell, "the Levant, and South America, German trade has made exceptionally rapid strides. * * * That country is now our competitor in all industries, and has undoubtedly taken away a considerable portion of what was formerly essentially British trade. We have now to fear her in all quarters of the globe."

The reasons alleged in England for German success are several: Government aid, including bounties and subsidies; "the superiority of her agents and exhibitors, her peculiar power of adapting goods to the requirements of foreign markets, and her credit system." Germany is actually an importer of raw materials from England, some of which she sends back to England in manufactured form. The largest export trade of Germany, in fact, is to Great Britain, and amounts approximately to 20 per cent of her total exports and in money value to about \$175,000,000 annually. Woollen goods are Germany's chief article of export; then comes sugar, then cotton goods—woolen and cotton goods forming about one-eighth of her shipments, with an increasing value, already exceeding \$100,000,000 annually.

Germany, in short, gives England a hundred years' start; gives her a vast world of colonies peopled by her own sons, who would naturally desire to buy from her; gives her a vast fleet of merchant vessels to carry her own manufactures under her own flag; and then, herself a unified country for less than half a century, under a protective system all the time, she competes successfully with free-trade England in her own commodities and her own markets—home, foreign, and colonial.

The competition of the United States has not reached the volume of that of Germany, nor has it been exercised so markedly in directions that, up to now, England has considered peculiarly her own. It has not, therefore, attracted quite the same attention; but it is regarded with serious concern, and with a conviction that it is destined to develop, in the near future, into imposing dimensions. It is admitted, both in England and Germany, that the United States is now placing iron and steel products on the European markets at prices with which neither England nor Germany can compete; and much attention has been drawn to the fact that the United States

has manufactured the machinery for the underground railroad in London and for tram and electric roads in several European centers. Comment has been made in the English papers on our establishment of a Bureau of Foreign Commerce and upon the rapidity with which official commercial information is given to the world in Washington; and great attention has been paid to our transportation rates, which are so low, as compared with those of Germany and England, as to amount to a bonus to trade.

MEASURES TO PROTECT TRADE.

Confronted thus by German and American competition, plans of defense have naturally exercised the minds of the merchants of England; and the most important and far-reaching of these no doubt has been the idea of an imperial customs union, with protection against the rest of the world. The colonies have come politically much closer to the Mother Country during the last part of this century; and the idea of imperial federation has fired the imagination and stirred the hearts of many British subjects. That the political effect will be important, most people believe; that the commercial or fiscal result will be considerable, is much to be doubted. The inexorable logic of figures proves that two-thirds of England's over-sea trade is with foreign countries, one-third with her colonies, and that an imperial zollverein would mean the sacrifice of the larger share of her commerce to the smaller portion. Besides this, free trade between England and her colonies and a tariff against the rest of the world would mean a tariff in England on food products. Now, in 1896, England imported from the United States over \$500,000,000 worth of commodities, most of which were food products; and this sum exceeds the total importations from all the British colonies together, including India. With the balance of political power in the hands of the workers living in towns, whose first demand is the "cheap loaf," it may at once be seen that the idea of the zollverein will not develop. Wherever practicable, however, such degree of reciprocity as is at all possible will doubtless be entered into.

As is well known, Canada has already provided by legislation for preferential tariff rates in favor of England; and, in order to profit by this concession, England has been obliged to denounce two treaties—one with Belgium and the other with Germany. These treaties contained the very unusual stipulation that the products of neither of these countries should be subject in the British colonies to other or higher duties than those imposed upon similar articles of British origin. They expired at the end of July, 1898, and Great Britain is now free to accept any concession in the way of preferential duties which any of her colonies may choose to bestow upon her. The

Canadian concession to the Mother Country was not made without exciting considerable opposition in Canada, on the ground that England was not in a position to render an equivalent; but English State cooperation, in the inauguration of a fast line of first-class steamships, was pointed to by the friends of a differential duty as something in the nature of a *quid pro quo*.

As regards the fast Canadian mail service, an agreement has been made between the Government of the Dominion and Messrs. Peterson, Tate & Co., of Newcastle-on-Tyne. These contracts are to provide a weekly service between Great Britain and Canada by four mail steamers of the first class at an average speed of 500 knots a day. Two of the steamers are to be ready by the 31st of May, 1899, when a fortnightly service is to be commenced, and the other two ships are to be ready a year later. I understand that the contribution to be made by the Mother Country towards the cost of the service when in full operation is £250,600 a year, and that your lordships, in making this contribution, have in view not merely the establishment of a fast mail service between this country and Canada, but also the completion by the governments of the colonies concerned of the scheme for communication with Australasia via Canada, proposed at the Ottawa colonial conference of 1894.

The above extract from the British Postmaster-General's report will show that this considerable subsidy is granted, to some extent, upon the political consideration of establishing rapid communication with Australia through its own territory and under its own flag. The date fixed for commencing the service has, since the above paragraph was written, been extended for one year. The contractors have secured this extra time on account of the delays resulting from the great strike of last year among the skilled iron workers of England. It is said, at the present moment, that the results of that strike have been to send nearly 25 per cent of the iron workers into the army and navy. There is such a scarcity of workers that iron manufacturers are much hampered, and are unable to fulfill their contracts.

PAYMENTS TO STEAMSHIP LINES.

The subsidies granted to ships by England are not called by that name. They are known as payments made for carrying the mails. The annual charge for the Australian service via the Suez Canal is \$827,300, to which Australia contributes \$364,900. The estimated receipts for sea postage amount to \$26,300, so that the annual loss on this service is \$436,000. The payments on account of the service to India and China are about \$1,290,600 per annum, of which about \$360,120 is contributed by India, Hongkong, etc. Some \$140,000 is received for postage, so that the loss here is approximately \$800,000. The New York service for the year 1897-98 will cost \$620,000; the receipts for postage will be about \$200,000, and the loss \$420,000.

The fortnightly service to the West Indies is paid for at the rate

of \$390,320 per annum. The contributions from the West Indies and from the postage bring the loss on this service down to \$220,800.

The Canadian-Chinese service costs \$292,000 per annum, of which Canada contributes \$73,000. The receipts for letters carried do not amount to more than \$10,000, so that this service involves the British Government in an annual expense of more than \$200,000.

These are the principal subsidies paid by the British Government. It would be denied in England that they are subsidies at all, and the denial would perhaps be correct, for their primary object is certainly not the encouragement of the mercantile marine. It is necessary to the commercial and political welfare of England that she should maintain rapid and certain communication with her colonies and Eastern dependencies, and this is the justification of her heavy payments for the carrying of mails in certain directions. The payments for the New York service have been somewhat increased of late years, on account of contracts by which specified ships shall be transferred to the Government on demand, to be used as cruisers.

COLONIAL TRADE.

We now turn to the consideration of the efforts of the Colonial Office to develop trade. In 1896, Mr. Chamberlain spoke as follows in the course of a speech:

All the great offices of state are occupied with commercial affairs. The Foreign Office and the Colonial Office are chiefly engaged in finding new markets and in defending old ones. The War Office and Admiralty are mostly occupied in preparations for the defense of these markets and for the protection of our commerce. The board of agriculture and of trade are entirely concerned with those two great branches of industry. Therefore, it is not too much to say that commerce is the greatest of all political interests, and that that government deserves most of the popular approval which does the most to increase our trade and to settle it on a firm foundation.

It would naturally be expected that the utterer of such sentiments would display great energy as Colonial Secretary in attempting to further the interests of trade; nor have these expectations been belied. No sooner was he in office than he devised a plan for showing the progress of foreign competition in the colonies during the decade ending with the year 1894, by means of an elaborate series of questions addressed to the governors of all colonies. I present Mr. Chamberlain's dispatch, questions, etc., in an appendix, and suggest that they be printed in full. They will show as nothing else can the minute and practical nature of the inquiry and the extreme care and ability with which the scheme was devised in order to bring about the most complete results. The replies to this inquiry have been lately issued in a folio volume of six hundred pages, which exhibits a complete account of the foreign trade of each colony, with

explanations as to the reason of changes in commercial practice where British-made goods have been superseded.* Mr. Chamberlain's dispatch required returns of those articles of which the total importation into each colony amounted to £500, and of which at the same time the non-British importation exceeded 5 per cent of the commodity. It appears from the returns that the percentage of non-British goods imported into the colonies was 25.71 per cent in 1884, 27.82 per cent in 1889, and 31.88 per cent in 1894. It is considered, however, that these returns do not indicate more than an approximation to the truth, and that the importations of non-British-made goods have really reached a higher percentage. It is the port of shipment that appears in the customs returns as the country of exportation. These statistics show the course of trade, not the origin and destination of produce.

It is not within the scope of this report to go far into the facts brought-out by Mr. Chamberlain, but I will make some quotations from the summary of his volume:

The countries which are most frequently mentioned in the returns as seriously competing with British goods are, without doubt, the United States and Germany; in some lines Belgium is an equally energetic competitor, but her scope appears to be more limited. In the East, the competition of Japan is rapidly becoming the leading feature in the trade of that part of the Empire.

Throughout the colonies, the report shows that the principal reason for the displacement of British-made goods is cheapness. The finish of non-British goods is in many cases alleged to be superior. South Australia reports that cheap German apparel is "got up" in a way superior to anything conceived by a British house; other colonies, that Belgian goods are far better finished than English at the same price; that American tools are far better in appearance; that American locks are lighter and cheaper. A good many colonies refer to particular articles no longer bought from Britain, because more suitably, cheaply, securely, and tastefully packed by other countries, and say that other countries, particularly Germany, are more industrious and pushing. The Straits Settlements makes the odd report that Nottingham has since 1889 been "sending out excellent imitations of the German low-priced goods," and it is stated generally in the Cape report that "where the British producers imitate the American style of the goods which displace theirs, they are beginning to regain the market."

I present in a second appendix a table showing some of the displacements of British trade, and the reasons given, and also some instructive and pertinent comments made by British manufacturers after inspecting the samples secured by Mr. Chamberlain. These

* Noted in *Review of the World's Commerce*, 1896-97, p. 282.

samples were sent about England and Scotland, and arranged for display in the respective cities by the local chambers of commerce. The Colonial Office can not render practical aid as regards imports into England from the colonies, but the colonies take care of themselves in this respect. The pains that are taken by Canada, Australia, and New Zealand to learn the requirements of the British market and to adjust their food products to those requirements merit the high compliment of imitation. Their agents in England, quasi diplomatic or commercial, are continually on the alert to protect, defend, and encourage their interests. Canadian cheese, to some extent no doubt from climatic reasons, is of a quality more appreciated by England than ours; so is it also with butter and with bacon. The United States is the largest shipper of bacon to England, but our packers are content to accept from \$2 to \$3 a cwt. under what is willingly paid for Canadian or Danish sides. We lose millions of dollars a year in this one article alone, because we will not adapt ourselves to English requirements.

Those colonies which send large quantities of food products to England maintain upon their statute books severe laws, which shall prevent inferior products from reaching the Mother Country. Canada, for instance, prohibits the manufacture of "filled cheese," and requires that imported food products shall be marked with the country of origin.

This law was obviously formulated to prevent the shipment of United States produce through Canada to England, there to be considered as Canadian. No cheese or butter marked as Canadian which is not of Canadian origin is allowed to be exported, and cheese made from skim milk is required to be legibly branded that it has been so made. I might multiply instances of such laws, but I have mentioned enough to show how careful are these colonies that the reputation of their goods shall be maintained in their one great market—England.

TECHNICAL EDUCATION.

I now turn to the consideration of what the British Government is doing for commerce in the direction of the technical education of its artisans. A great deal, so far as money grants are concerned, is being done for technical education; but part of the expenditure is useless, on account of the lack of facilities for secondary education, and part is dissipated without adequate result, on account of the system employed in distribution. Free education is a new thing in England and is as yet confined to elementary subjects, and it has been found that many who are eager to avail themselves of the facilities for technical education have lacked the necessary preliminary

knowledge. The merchants and manufacturers of England, satisfied with the development and progress of technical education and with the support accorded to it by the State, have been pressing upon the Government the enlargement of the scope of secondary and commercial education; and improvements are being made in this direction.

The State appears to be content with the most limited oversight and control of the funds it contributes towards technical education. It distributes them among local authorities—counties, county boroughs, boroughs, and urban districts—to employ as they will upon technical education. Some of these local authorities add to the Government grant out of local income, and Government and local funds are largely supplemented in London and a few of the larger towns by the beneficence of nongovernmental institutions, of which more hereafter.

The difference between such a decentralized scheme and the centralized, perhaps bureaucratic, administration of the German institutions of a similar nature is seen at a glance. The British Government appears to consider that it has done its duty in providing the funds. It trusts to the local authorities for their proper employment. The grave fault with such a system is the waste of money through too great diffusion. It may be theoretically right that all parts of the country should participate; but the few dollars per annum allocated to a small village will probably, in most cases, be unproductive of results. More money in the industrial centers and in institutions that should provide every means by which the artisan may become a more efficient worker would bring better ultimate results to the trade of England.

The annual governmental expenditure on technical education in the United Kingdom somewhat exceeds \$4,000,000, the greater part of which comes from the national coffers; but this sum by no means represents the total expenditure. It is richly enlarged by contributions from another source, as will now be shown.

The ancient trade guilds of the city of London have long outlived their usefulness in connection with commerce and industry, but are in receipt of an enormous aggregate income, due to the appreciation through centuries of the value of their respective estates. In 1880, ten years before the Government took any interest in the subject, they decided to expend a portion of their revenues in providing means for technical education. The result was the foundation of the "City and Guilds of London Institute for the Advancement of Technical Education," and this institute, entirely free from governmental control and receiving nothing from the State, practically directs the national system of technical education. It maintains a college in

London for higher technical instruction in mechanics and mathematics, civil, mechanical, and electrical engineering, and chemistry; a college for training students for intermediate posts, with day and evening classes; an art school with classes in modeling, designing, wood engraving, drawing and painting, house decorating, machine drawing and designing, plaster work, etc.; and, finally, it maintains a system of technological examinations, which are conducted once a year at various centers throughout the country. As the certificates which it gives for the successful passing of its examinations are highly valued by students and are of practical use to them in obtaining situations, it will at once be seen that through its examination system it practically dominates the policy of technical education. Its most valued certificate is reserved for a candidate from a "registered" class. In order that a class may be registered, it must be under the direction of a county or town council or technical school or school board or other public body, and the qualifications of the teacher must be approved by the institute. No important educational institution of the kind in question exists throughout the entire country that is not affiliated, at least to the extent above outlined, with the institute, and thus it maintains an efficient but elastic control. It is needless to say that it has won its honorable preeminence unaided by the law or the State, entirely through the ability with which its operations have been conducted. Its examinations committee and board comprise some of the foremost men in education and science in England, and the superintendent of the board, Sir Philip Magnus, is the highest authority on technical education in the country. I may add that the example of the London guilds has been followed in other cities, as, for instance in Bristol, where the Society of Merchant Venturers has erected and endowed a complete school for technical instruction.

Technical instruction may be had in London in all of the following subjects, and in many of the larger cities in most of them:

- | | |
|---|--|
| (1) Salt manufacture. | (15) Pottery and porcelain. |
| (2) Alkali manufacture. | (16) Glass making. |
| (3) Soap manufacture. | (17) Dressing of skins. |
| (4) Bread making. | (18) Leather tanning. |
| (5) Brewing. | (19) Boot and shoe manufacture. |
| (6) Spirit manufacture. | (20) Silk dyeing. |
| (7) Coal-tar products. | (21) Wool dyeing. |
| (8) Sugar manufacture. | (22) Cotton dyeing. |
| (9) Painters' colors, oils, and varnishes. | (23) Cotton and linen bleaching. |
| (10) Oils and fats, including candle manufacture. | (24) Calico and linen printing. |
| (11) Gas manufacture. | (25) Wool and worsted spinning. |
| (12) Iron and steel manufacture. | (26) Wool and worsted weaving and designing. |
| (13) Paper manufacture. | (27) Cotton spinning. |
| (14) Photography. | (28) Cotton weaving. |

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|---|---------------------------------------|
| (29) Flax spinning. | (46) Mechanical engineering. |
| (30) Linen weaving. | (47) Road-carriage building. |
| (31) Silk throwing and spinning. | (48) Rail-carriage building. |
| (32) Silk weaving. | (49) Typography. |
| (33) Jute spinning. | (50) Lithography. |
| (34) Jute weaving. | (51) Raising and preparation of ores. |
| (35) Lace manufacture. | (52) Mine surveying. |
| (36) Frame-work knitting and hosiery. | (53) Slate quarrying. |
| (37) Hat manufacture. | (54) Carpentry and joinery. |
| (38) Telegraphy and telephony. | (55) Ship carpentry. |
| (39) Electric lighting and power. | (56) Ship joinery. |
| (40) Electroplating and deposition. | (57) Brickwork. |
| (41) Metal-plate work. | (58) Masonry. |
| (42) Plumbers' work. | (59) Plasterers' work. |
| (43) Silversmiths' work and plated wares. | (60) Painters' and decorators' work. |
| (44) Goldsmiths' work and manufacture
of personal ornaments. | (61) Milling (flour manufacture). |
| (45) Watch and clock making. | (62) Cabinetmaking. |
| | (63) Bookbinding. |

FOR WOMEN.

- | | |
|-------------------|------------------------|
| (64) Dressmaking. | (66) Plain needlework. |
| (65) Millinery. | (67) Plain cookery. |

It is almost too soon to say definitely what the results of such education have been, and practical information can only be obtained by a wide correspondence with manufacturers who have actually employed those technically trained. It is generally believed, however, by manufacturers and commercial men that technical training, as yet in its infancy, will materially advance the capacity of the worker, thus increasing the manufactured output per human unit employed—the great end and aim of all modern energy.

SUMMARY.

In completing this report, I may say that for nearly half a century the leading principles of Great Britain's commercial policy have been: First, the complete freedom of raw materials from taxation; second, the freedom of the means of subsistence, and, third, the freedom of imported manufactures.

In conclusion, I would remark that, notwithstanding the free-trade policy of Great Britain, which has lasted some fifty years, the competition of the United States and Germany has of recent years become so keen that the British Government has been pressed to take steps to protect home industries against foreign competition.

APPENDIX A.

DISPATCH TO GOVERNORS OF COLONIES ON THE QUESTION OF TRADE WITH THE UNITED KINGDOM.

DOWNING STREET, *November 28, 1895.*

MY LORD, SIR: I am impressed with the extreme importance of securing as large a share as possible of the mutual trade of the United Kingdom and the colonies for British producers and manufacturers, whether located in the colonies or in the United Kingdom.

(2) In the first place, therefore, I wish to investigate thoroughly the extent to which in each of the colonies foreign imports of any kind have displaced, or are displacing, similar British goods and the causes of such displacement.

(3) With this object, I take this opportunity of inviting the assistance of your government in obtaining a return which will show for the years 1884, 1889, and 1894—

(a) The value (if any) of all articles specified in the classification annexed imported into the colony under your government from any foreign country or countries, whenever (and only when) the value of any article so imported from any foreign country or countries was 5 per cent or upwards of the total value of that article imported into the colony from all sources, whether within or without the British Empire, and when the total value of that article imported was not less than £500.

(b) The reasons which may have in each case induced the colonial importer to prefer a foreign article to similar goods of British manufacture.

(4) These reasons (which should take the shape of a report on each article separately of which the foreign import exceeded 5 per cent of the whole import and of which the total value imported was not less than £500, as defined above) should be classified and discussed under one or other of the following heads:

(a) Price (delivered in the colony) of the foreign article as compared with the British. The term "price" is not intended to include the duty (if any) levied in a colony; it is the ordinary price in bond, and this should be clearly understood in making the report. But where it is found impossible to give any except the wholesale price (duty paid), this should be stated, and the exact amount of duty entering into the price should be given. In treating of price, regard should be had to cost of transport, facility of communication with any given country, subsidies to shipping, special railway rates, bounties on export, terms of credit or payment given by British or foreign exporters, rates of discount, etc.

(b) Quality and finish, as to which full particulars should be given.

(c) Suitability of the goods for the market, their style or pattern. In connection with this, and in illustration of the reasons for the displacement of British goods of any class, it is important that patterns or specimens of the goods preferred should be sent home, unless the bulk is very great. This will be necessary chiefly in those cases where the difference can not be fairly described in writing.

(d) Difference of making up or packing, as to which full particulars should be given.

(e) False marking, such as piracy of trade-marks, false indications of origin, or false indications of weight, measure, size, or number.

(f) Any other cause which may exist should, of course, be stated.

It sometimes happens that imports which actually come from foreign countries pass through Great Britain and are included in colonial statistics as British. Where this is a matter of common knowledge, I shall be obliged to you if you will treat of these imports under the headings embraced in this paragraph, notwithstanding the fact that they are not distinguished in the returns.

(5) With a view to facilitating the return, I annex to this dispatch a draft of the form under which the particulars above requested may be returned; a list of commodities which is intended as far as possible, to secure uniformity in making the return; and a schedule of instructions as to filling up the return, which I would beg you to commend to the attention of those on whom the preparation of the return may fall.

(6) To select the best classification to guide your advisers in their investigations has been a task of some difficulty. Most colonies have classifications of their own, usually admirable of their kind; but as they have been mainly compiled for the special tariff purposes of each colony they differ considerably from one another and do not afford a basis of classification generally applicable to all colonies. I have therefore, on the whole, thought it best to adopt the condensed classification used by the board of trade in the annual statistical abstract for the exports of the United Kingdom. At the same time, I suggest that those responsible in each colony for furnishing the returns for which I am asking should expand their return under each chief heading by such detailed subheads as may be suggested either by the ordinary colonial returns or by the course of trade in the particular colony; and in this connection, I append a schedule of subdivisions suggested by various chambers of commerce in this country.

(7) I am further desirous of receiving from you a return of any products of the colony under your government which might advantageously be exported to the United Kingdom or other parts of the British Empire, but do not at present find a sufficient market there, with any information in regard to quality, price, or freight which may be useful to British importers. I mention the matter here that you may be prepared with information, but I am contemplating the preparation of a further and fuller dispatch on this branch of the subject.

(8) I am well aware how much has been and is being done in this direction by the self-governing colonies through the high commissioner for Canada and through the agents general, and also by the Imperial Institute, the Royal Colonial Institute, and other public bodies. I am glad to have this opportunity of expressing my admiration for the excellence of this work, but in a matter of such importance no additional efforts or opportunities of acquiring information can be superfluous.

(9) I shall be glad to have these returns as soon as possible, and shall greatly appreciate your expedition in the matter.

I have, etc.,

J. CHAMBERLAIN.

Annexe I.—Form of return.

Commodity.	Total value of importation.	Value of importations from foreign countries.	
	£		£
		a. France.....	
		b. Germany	
		c. United States, etc.	
		Total	

Numbered list of commodities for use, according to the instructions (Annexe II), in making the return.

- | | |
|--|--|
| (1) Alkali. | (27) Glass—Continued. |
| (2) Animals (horses). | (c) Common bottles. |
| (3) Apparel and slops. | (d) Of other sorts. |
| (4) Arms and ammunition: | (28) Grease, tallow, and animal fat. |
| (a) Firearms (small). | (29) Haberdashery and millinery. |
| (b) Gunpowder. | (30) Hardware and cutlery. |
| (c) Of all other kinds. | (31) Hats of all sorts. |
| (5) Bags, empty. | (32) Implements and tools of industry. |
| (6) Beer and ale. | (33) Instruments and apparatus (surgical, anatomical, and scientific). |
| (7) Biscuit and bread. | (34) Leather: |
| (8) Bleaching materials. | (a) Unwrought. |
| (9) Books, printed. | (b) Wrought— |
| (10) Butter. | Boot and shoe. |
| (11) Candles of all sorts. | Of other sorts. |
| (12) Caoutchouc, manufactures of. | (c) Saddlery and harness. |
| (13) Carriages and wagons, railway. | (35) Linen and jute yarn: |
| (14) Cement. | (a) Linen yarn. |
| (15) Cheese. | (b) Jute yarn. |
| (16) Chemical products and dyestuffs. | (36) Linen and jute manufactures: |
| (17) Clay, unmanufactured. | (a) Linen manufactures— |
| (18) Clocks and watches. | White or plain. |
| (19) Coals, etc.: | Printed, checked, or dyed. |
| (a) Coals, cinders, and fuel. | Sailcloth and sails. |
| (b) Products of coal (except dyes). | Thread for sewing. |
| (20) Cordage and twine. | Of other sorts. |
| (21) Corn: | (b) Jute manufactures. |
| (a) Wheat. | (37) Machinery: |
| (b) Wheat flour. | (a) Steam engines. |
| (c) Of other kinds. | (b) Of other sorts. |
| (22) Cotton yarn. | (38) Manure. |
| (23) Cotton manufactures: | (39) Medicines. |
| (a) Piece goods— | (40) Metals: |
| White or plain. | (a) Iron— |
| Printed, checked, or dyed. | Old, for remanufacture. |
| Of mixed materials. | Pig and puddled. |
| (b) Stockings and socks. | Bar, angle, bolt, and rod. |
| (c) Thread for sewing. | Railroad, of all sorts. |
| (d) Lace and patent net. | Wire. |
| (e) Hosiery and small wares. | Hoops, sheets, and boiler plates. |
| (24) Earthen and china ware, including manufactures of clay. | Tinned plates. |
| (25) Fish: | Cast or wrought, and all other iron manufactures. |
| (a) Herrings. | Steel, unwrought. |
| (b) Of other sorts. | Manufactures of steel, or of steel and iron combined. |
| (26) Furniture, cabinet, and upholstery wares. | |
| (27) Glass: | |
| (a) Plate, rough, or silvered. | |
| (b) Flint. | |

- (40) Metals—Continued.
 (b) Copper—
 Unwrought (ingots, cakes, or slabs).
 Wrought or partly wrought—
 Mixed or yellow metal.
 Of other sorts.
 (c) Brass of all sorts.
 (d) Lead (pig, sheet, and pipe).
 (e) Tin, unwrought.
 (f) Zinc, wrought and unwrought.
- (41) Musical instruments.
 (42) Oil and floor cloth.
 (43) Oil, seed.
 (44) Painters' colors and materials.
 (45) Paper (other than hangings).
 (46) Pickles, vinegar, and sauces.
 (47) Pictures.
 (48) Plate and plated ware.
 (49) Provisions, not otherwise described.
 (50) Rags and other materials for paper.
 (51) Salt.
 (52) Seeds of all sorts.
 (53) Silk, thrown, twist, and yarn.
 (54) Silk manufactures:
 (a) Broad piece goods.
 (b) Of other kinds.
- (55) Skins and furs:
 (a) British.
 (b) Foreign, British dressed.
- (56) Soap.
 (57) Spirits.
 (58) Stationery (other than paper).
 (59) Stones and slates (slate by tale).
 (60) Grindstones, millstones, and other sorts of stones.
 (61) Sugar, refined.
 (62) Telegraphic wire and apparatus.
 (63) Umbrellas and parasols.
- (64) Wood and timber, manufactured (staves and empty casks and unenumerated).
 (65) Wool:
 (a) Sheep and lambs'.
 (b) Flocks and rag wool.
 (c) Foreign, dressed in the United Kingdom.
 (d) Noils.
 (e) Waste.
 (f) Combed or carded and tops.
- (66) Woolen and worsted yarn.
 (67) Woolen and worsted manufactures:
 (a) Woolen tissues—
 Heavy broad—
 All wool.
 Mixed.
 Heavy narrow—
 All wool.
 Mixed.
 Light broad—
 All wool.
 Mixed.
 Light narrow—
 All wool.
 Mixed.
 (b) Worsted coatings—
 Broad—
 All wool.
 Mixed.
 Narrow—
 All wool.
 Mixed.
 (c) Flannels.
 (d) Blankets.
 (e) Worsted stuffs, etc.—
 All wool.
 Mixed.
 (f) Carpets and druggets.
 (g) Of all other sorts.
- (68) Yarn, alpaca, and mohair, and other sorts unenumerated.

Annexe II.—Instructions for filling up the returns.

(1) Each article in the classified list which comes within the description given in the dispatch—*i. e.*, of which the importation from all foreign countries amounts to 5 per cent of the total importation of the article (not being less than £500)—should be included in the return. Articles in the list which do not answer that description in the case of the returning colony should be omitted. It has been thought better to present the Board of Trade classification as a whole, although some of the articles enumerated in it are not likely to be part of the importations into many of the colonies.

(2) Each article returned should be returned with the number prefixed to it in the list.

(3) The list is general in its headings, and in making up the returns under those headings the actual articles of trade coming under each heading should be distinguished by subheads (*a*), (*b*), (*c*), etc., and by the general trade name under which the articles are sold in the returning colony. These subheads will often be obtainable from the tariff classifications of the returning colony; but, wherever possible, the principal merchants should be consulted, and the returns of commodities with the reports upon each should be elaborated in the light of their experience of the actual articles in demand in the colony, which are properly included under the general headings set down in the list.

(4) The return of reasons, etc., should be made in respect of each commodity in order, with the "list" number and subhead index letter prefixed for facility of reference.

(5) The return of reasons, etc., should deal with each of the headings mentioned in the dispatch in respect of each article returned, that is to say—

(*a*) Price. (N. B.—In the case of textile goods the "width" in inches should be given for each pattern.)

(*b*) Quality.

(*c*) Suitability.

(*d*) Packing.

(*e*) Other causes, in so far as they affect the choice of the article he uses by the consumer.

(6) In sending home patterns, a large discretion is left to each colony, but it is desirable to include everything within reason in which the foreign style and pattern is preferred—*e. g.*, spades, knives, tools, yarn and textile goods of every description, writing paper, etc. Where patterns are sent, the fact should be recorded in the return; more than one pattern should, where possible, be sent, and each pattern should bear the "list" number of the commodity it refers to, the name of the country of its origin and of the colony from which it is transmitted.

(7) The packages containing patterns of all goods sent from the colony under your government in response to this dispatch should be consigned to the secretary London Chamber of Commerce, Eastcheap, London, E. C., as that chamber of commerce has undertaken the duty of housing and distributing the samples in this country, and of carrying out any expressed wish of any colony in regard to their subsequent distribution and ultimate disposition.

APPENDIX B.

The following table has been designed to summarize roughly the main facts which may be gathered from the returns, not only as to the countries which compete in British markets, but also as to the chief commodities in which competition is fairly general and the nature of the competition which the British trader has to meet in each case:

Commodity.	Nature of displacement.	Displacing country.	Instances of markets affected.
Apparel and slops of various kinds.	Cheaper and more serviceable article; low lines of goods well done.	Germany	Sierra Leone.
		.....do	New South Wales.
		.....do	Victoria.
		Germany and Japan.....	Straits Settlements.
		Continent	Malta.

Commodity.	Nature of displacement.	Displacing country.	Instances of markets affected.
Arms and ammunition: Firearms	Competition of a cheap and showy article.	Belgium..... do..... do..... do..... Germany..... Continent..... Continent and America..	Ceylon. Straits Settlements. Victoria. South Australia. Lagos. Hongkong. South Australia.
Gunpowder		Germany..... do..... do..... do..... do..... do..... United States.....	British Honduras. Trinidad. Gold Coast. Sierra Leone. Straits Settlements. Cape Colony. Jamaica.
Beer and ale.....	The production of a lighter and more suitable drink.	Germany..... do..... do..... do..... do..... do..... United States.....	Trinidad. Gold Coast. Sierra Leone. Straits Settlements. Cape Colony. Jamaica. Hongkong.
Candles	Decidedly cheaper goods.	Belgium..... do.....	New South Wales. Eastern colonies.
Cement.....	A finer grain, good quality, and lower price.	Germany..... do.....	South Australia.
Chemical products.....	Better manufacture, apparently depending on more skilled knowledge.	do.....	New South Wales.
Clocks and watches.....	Cheaper make, more attractive, more artistic, better looking.	United States..... do..... Germany and Japan..... Germany..... Switzerland.....	Leeward Islands. South Australia. Straits Settlements. Cape Colony. Malta.
Cotton manufactures.....	Cheaper goods of more showy character; special lines; especially in stockings and hosiery.	Germany..... do..... United States..... do.....	Bahamas. Straits Settlements. British Honduras. Windwards.
	Better cashmere.....	France..... Germany.....	Do. Tasmania.
	Haberdashery.....	do..... France.....	Sierra Leone. Do.
	Inferior hosiery.....	Germany..... do.....	Straits Settlements. Malta.
	Stockings better suited to market.	do.....	Hongkong.
Furniture	Lighter and cheaper goods, quicker made.	Austria..... do..... Austria and Germany... United States..... Germany..... do..... Continent generally.....	West India colonies. Ceylon. Cape Colony. Do. Sierra Leone. Lagos. Malta.
Glassware.....	Better and cheaper goods.	Belgium and Germany.. Belgium and France..... Belgium and Continent.. United States..... Belgium.....	Straits Settlements. Cape Colony. New South Wales. Victoria. Do.
Lamp chimneys.....	do.....	United States..... Belgium.....	Do. Bahamas.
Hardware.....	The States have a better name; there is more trouble taken to give variety; cheaper goods, better suited.	United States..... Germany..... do..... do.....	Windwards. Sierra Leone. Malta.
Cutlery.....	Cheaper goods.	do..... do..... do..... do.....	Lagos. Straits Settlements. Malta.

Commodity.	Nature of displacement.	Displacing country.	Instances of markets affected.
Implements and tools of industry.	Cheaper tool with lower freight. New patterns, more suitability. Effect of patents and advertising.	Germany..... United States..... Germany..... United States..... Germany.....	Gold Coast. Tasmania. Do. Trinidad. Do.
Metals:			
Iron and steel.....	Cheaper price, and equally good or even better quality.	.....do..... Belgium.....	Straits Settlements. Do.
Nails.....	.....do.....	.....do..... Germany.....	New South Wales. Do.
Wire nails.....	.....do.....	.....do..... Belgium..... United States..... Continent.....	Hongkong. Do. Cape Colony. New South Wales.
Wire.....	.....do.....	Germany..... .....do.....	Victoria. West Australia.
Yellow metal.....	.....do.....	.....do.....	Hongkong.
Plate and plated ware.....	Novelty of design.....	United States.....	Cape Colony.
Woolen manufactures.....	Better designs in the finer goods. [Not much competition in heavier goods.]	Germany..... Austria, Germany, and Belgium. Germany.....	Straits Settlements. Cyprus. Tasmania.

APPENDIX C.

QUOTATIONS FROM COMMUNICATIONS OF BRITISH MANUFACTURERS ON INSPECTING SAMPLES OF GOODS.

(1) *The character of the samples received.*

"What we are surprised at is that the demand for goods made of such rubbish can be maintained, as, although the price is low, to the wearer they must be expensive."

"The first impression that they made upon my mind is that I should be sorry if British manufacturers turned out such stuff."

"I am fully convinced that the quality is such that no manufacturer of repute here would care to share in such a trade, and certainly I am not inclined to blame him. No doubt the establishment of factories for turning out 'shoddy' would increase the volume of British trade in some markets; but whether this would tend to the ultimate advantage and reputation of British industry is a debatable point."

"Most of the samples shown are of the very cheapest it is possible to make, and can only be made in the sweating dens of the East End or similar places where no stated wage exists."

"I must give it as my opinion that the saws are far inferior in style, durability, and finish to similar goods of English manufacture, and feel sure that goods of such quality would not be put on the market by an English house for their own reputation; this fact, in my estimation, is the true cause of our losing the market, combined with our higher scale of wage in English manufacture as compared with the foreign."

"Some of the specimens are doubtless inferior to British-made goods; but moleskin trousers at 1s. 8d. a pair, socks at 1s. 4d. a dozen, fancy straw hats at 4s. 5d. a dozen, iron spoons at 21s. 8d. per 100 dozen, shirts at 17s. 6d. a dozen, cotton trousers at 17s. 8d. a dozen, and Swedish matches at 2s. 4d. a gross—all of

European make—also American 26-inch handsaws at 15s. a dozen, are matters for serious reflection."

"The articles exposed which I am interested in—cutlery, electroplate—are of such an inferior class that it is very doubtful if anything so poor is manufactured in this country, and the value is an item of little importance, so that I am of opinion we don't care who has this particular branch of business."

(2) *The nature of the market to be supplied.*

"It is as in every other kind of merchandise where the laboring classes receive but small pay. They want goods agreeable to the eye and at low prices."

"English manufacturers do not consider that cheap and lower class goods are salable to the inhabitants of our colonies, where generally people can not afford to pay so much for their goods."

"I am bound to say that those samples amongst your collection which emanated from America commended themselves to me as the most suitable for the market under notice. I understand that the native does not as a rule use boots in everyday life, but regards them only as a fitting adornment for his periodical visits to the towns."

"I was glad to have the opportunity of examining the samples of straw hats of German manufacture from West Indian markets. I may say that this class of goods can be made in England at quite as low a price as those made in Germany, and we shall lay before our West Indian clients similar goods, though we do a good business with this market in straw hats of a very superior class both as regards style and texture, and our business with this colony is done with a much more profitable article, but we are always ready to meet the requirements of all markets."

"It is a matter of common knowledge that only a very low priced article is salable in wholesale quantities in the West Indian market; but I was hardly prepared to find such utter rubbish as was represented in your collection."

"It is the necessity for such climates of lightness and flexibility, points which English traditions combat and condemn, but of which the determined neglect has opened most of our colonial markets to the productions of the Continent and America."

"Of course, the articles now on show are good for the price, but will not compare with the uniform excellence of English-made goods. If buyers are satisfied, we must climb down to the foreign standard in order to enter the field successfully, and ship under more favorable terms; as this latter is an item to be considered, some energetic combination of this kind must take place to revive the industry we are interested in."

"The goods in our class inspected—viz, (furniture for) stays—show the demand for lighter and less shaped articles than are in demand for the home market, and the knowledge of the same through this collection is of use to us as manufacturers."

(3) *Comparison of British and foreign samples.*

"When it comes to superior articles in the textile products, we certainly hold our own in all markets. In the hardware lines, more especially sharp-edge tools, the Americans take the lead."

"I was impressed with the fact that there was an amount of style introduced into the very commonest goods which has not been aimed at in this country and which I should consider the chief advantage which American makers have had to offer."

"I regret I can only give you my opinion of the American files; these I consider are quite equal to the majority of Sheffield make, both in finish and regularity of cutting, and in price a little lower than what I have been buying at."

"In the present exhibition, I could not but observe the advantage of both American and German hardware over similar British manufactures, both in the lightness and neat finish of the article and the neatness of the package; this more particularly in locks."

"The English manufacturer continues using his old machines and thereby gives the Spaniards the preference in most foreign markets. No wonder that they constantly increase their factories, and yet, although some are working day and night, they can not supply half the demand made upon them. The production of hosiery in Spain is comparatively new, and before long Nottingham will certainly have lost most of its foreign trade in this special article, the more so as the Spanish productions, even in cheap undershirts of 3s. per dozen, come out very perfect in make and appearance, whereas the cheaper Nottingham goods, for which cheap labor is employed, look, in comparison, like Whitechapel."

APPENDIX D.

LIST OF PRINCIPAL PUBLICATIONS OF THE BOARD OF TRADE.

(1) *Annual publications.*

Annual statement of the trade of the United Kingdom with foreign countries and British possessions for the year 1896. Price, 4s. 2½d.

Annual statement of the navigation and shipping of the United Kingdom for the year 1896. Price, 3s. 3d.

Tables showing the progress of British merchant shipping, 1896. Price, 6d.

Railway returns for England and Wales, Scotland, and Ireland, 1896. Price, 11d.

General report to the Board of Trade in regard to the share and loan capital traffic in passengers and goods, etc., of the railway companies of the United Kingdom, 1896. Price, 4d.

Railway, etc., bills.—Report by the Board of Trade upon all the railway, canal, tramway, gas, and water bills and provisional orders of session, 1897. Price, 7½d.

Statistical tables relating to emigration and immigration from and into the United Kingdom in the year 1896. Price, 6d.

Statistical abstract for the United Kingdom. 1882–1896. (Forty-fourth number.) Price, 1s. 1d.

Statistical abstract for colonial and other possessions of the United Kingdom. 1880–1895. (Thirty-third number.) Price, 1s. 2d.

Statistical abstract for principal and other foreign countries. 1885 to 1894–95. (Twenty-third number.) Price, 1s. 5d.

Bankruptcy.—Report by the inspector-general in bankruptcy for the year 1896. Price, 8d.

Sea fisheries of the United Kingdom, 1896.—Statistical tables and memorandum relating to the sea fisheries of the United Kingdom in the year 1896. Including also a return of the quantity of fish carried by railway from each of the principal ports of England and Wales, Scotland, and Ireland in each year from 1891 to 1896, inclusive. Price, 5½d.

Abstracts of the returns made to the Board of Trade of sea casualties which occurred on or near the coasts of the United Kingdom from the 1st of July, 1895, to the 30th of June, 1896 (with charts and appendices). Price, 4s. 7d.

Report of the comptroller-general of patents, designs, and trade-marks, with appendices for the year 1896. Price, 2½d.

Coal production.—The production and consumption of coal and the number of

persons employed in coal production in the principal countries of the world in each year, from 1883 to 1895. Price, 5d.

Annual report of the labor department, with abstract of labor statistics. 1896-97. Price, 1s.

Annual report of the labor department on changes in wages and hours of labor in the United Kingdom. Price, 1s. 6d.

Strikes and lockouts.—Report on the strikes and lockouts of 1896. Price, 1s. 2d.

Labor statistics.—Statistical tables and reports on trade unions, 1894-95. Price, 4s. 4d.

First report by the Board of Trade of proceedings under the conciliation (trades disputes) act, 1896.

(2) *Occasional returns.*

Alcoholic beverages.—Production and consumption of alcoholic beverages (wine, beer, and spirits) in the various European countries and in the United States. Price, 8½d.

British and foreign trade.—Memorandum on the comparative statistics of population, industry, and commerce in the United Kingdom and some leading foreign countries. Price, 6d.

Wages.—Textile trades. Return of rates of wages in the principal textile trades of the United Kingdom, with report thereon. Price, 1s. 6d.

Wages.—Textile trades. Return of rates of wages in the minor textile trades of the United Kingdom, with report thereon. Price, 9½d.

Wages.—Mines and quarries. Return of rates of wages in the mines and quarries in the United Kingdom, with report thereon. Price, 1s.

Wages.—General report. Report on the wages of the manual-labor classes. Price, 4s. 3d.

Report on agencies and methods for dealing with the unemployed. Price, 1s. 9d.

Profit sharing.—Report on profit sharing. Price, 10d.

APPENDIX E.

CONTENTS OF A LATE NUMBER OF THE BRITISH BOARD OF TRADE JOURNAL.

I.—Board of Trade notes.

State of skilled labor market. Warning to British capitalists. The manufacture of straw coverings for bottles. Official inquiries under the boilers-explosion act. Closing of navigation at Cronstad and St. Petersburg. Official denial of famine in Archangel. Certificates of origin signed by French consuls in the United Kingdom. London agents for Italian firms. Daily publication of United States consular reports. Payment of import duties in Guatemala. Payment of customs duties in Peru. Revised customs tariff for Brazil. Tenders for electric tramway in Spain. Tenders for telephone system in Tarragona. Rolling stock for Roumanian railways. Government contracts. Awards for gallantry. Inspectors of weights and measures.

II.—Foreign trade of the United Kingdom.

III.—The production and consumption of alcoholic beverages.

IV.—British vs. German trade methods.

V.—The gold fields of the Klondike.

VI.—The Russo-Korean Bank and Russian enterprise in Korea.

VII.—German combination to undersell British rails.

- VIII.—The shipbuilding trade in Germany.
- IX.—Cuban autonomy and Cuban trade.
- X.—The effect of American competition upon foreign producers.
- XI.—American machinery in the world's markets.
- XII.—The American cotton-goods trade.
- XIII.—Beet sugar in the United States.
- XIV.—The cotton-seed industry of the United States.
- XV.—German competition in Argentina.
- XVI.—Trading stations of the west coast of Africa.
- XVII.—Trade and industry of Madagascar.
- XVIII.—The cultivation of coffee and tea in India.
- XIX.—False trade descriptions in India.
- XX.—The trade and industry of British Columbia.
- XXI.—Certificates of origin in Spain.
- XXII.—New Bulgarian customs tariff.
- XXIII.—Tariff changes and customs regulations.
Russia, Belgium, Germany, France, France—Algeria, France—Tunis, France—Bulgaria, Portugal—Denmark, Portugal—Belgium, Spain—Cuba, Switzerland, United States, Mexico, Guatemala, Ecuador, Uruguay, Grenada, Cape Colony.
- XXIV.—Extracts from diplomatic and consular reports.
Harbor works at Windau. Transport charges of kerosene from Baku. Opening of the Vologda-Archangel railways; new German steamship line to the Far East. Ships' measurement in Germany and Great Britain. Depots of tar in Belgium. Bounty on flax and hemp in France. Modifications in the French legal code in the case of collisions at sea. Proposed new breakwater at Barcelona. The new floating dock at Barcelona. The undeveloped industries of Hungary. Trade guilds in Bulgaria. Projected new railways in Bulgaria, etc.
- XXV.—General trade notes.
General.—Shipping through the Suez Canal. The Belfast linen trade. British Chamber of Commerce in Paris. Imports of pig iron and unwrought steel into the United Kingdom from the United States.
Foreign.—Russian crops in 1897. Russian customs receipts. Viticulture in Saxony. Report of the Lyons mission to China. Beet-root sugar industry in Italy. Production of indian corn in Italy. Serbian dried-plum industry. American floating exhibition. Customs receipts in Mexico, etc.
Indian.—Indian emigration. Jute and hemp mills in British India, etc.
- XXVI.—Proceedings and deliberations of the chambers of commerce of the United Kingdom.
- XXVII.—Recent trade blue books.
- XXVIII.—Quarantine notices.
- XXIX.—Post-office notices.
- XXX.—Statistical tables.
I.—The foreign trade of the United Kingdom. II.—Corn prices. III.—Emigration. IV.—Alien immigration. V.—Bankruptcy. VI.—Export of live animals from Ireland to Great Britain. VII.—English fisheries. VIII.—Scotch fisheries. IX.—Irish fisheries. X.—Cotton returns. XI.—Imports and exports into and from foreign countries. XII.—Foreign trade of India.
- XXXI.—List of diplomatic and consular reports.
- XXXII.—List of colonial-office reports.

JAPAN.

The following has been received from Consul-General Gowey, of Yokohama:

I have the honor to acknowledge the receipt of the Department's instruction of September 27, 1897, requesting for publication in CON-SULAR REPORTS a comprehensive report on the foreign-trade policy of the Government of the Japanese Empire, and, in reply to the interrogatories propounded therein, I have to say that the success achieved by Japanese manufacturers and exporters seems to be due, in some degree, to the cheapness of their goods; Government aid, however, has had a stimulating effect in the extension of their foreign markets. The Government department called the "Noshomusho" is devoted to the interests of agriculture and commerce. Two copies of a statistical work just published by this department entitled General View of Commerce and Industry in the Empire of Japan are transmitted herewith.*

Under this department are bureaus of commerce and industry, forestry, mining, patents and trade-marks, a geological survey, a fish commission, a commercial museum, experimental farms, and the Paris Exposition committee.

MERCHANT MARINE.

Commerce receives further governmental aid by the support extended to its merchant marine in the shape of bounties and subsidies. The principal steamship company, known as the Nippon Yusen Kaisha (head office at Tokyo), has 76 vessels, with a net registered tonnage of 129,308 tons; 14 vessels have over 3,000 tons net, 4 vessels over 2,000 tons net, 37 vessels over 1,000 tons net, and 21 vessels under 1,000 tons net. This company receives from the Imperial Government an annual subsidy of 800,000 yen (about \$400,000).

There is but one other steamship company of importance, namely, the Osaka Shoren Kaisha (head office at Osaka), which receives Government aid for carrying mails, as does the Nippon Yusen Kaisha. No positive figures are obtainable as to the tonnage and number of vessels owned by this company and the amounts received by it, but they are very much less than those of the former company.

By a law which came into force on October 1, 1896, a vessel of above 1,000 tons that runs more than 10 knots per hour receives a

* Filed for reference in the Bureau of Foreign Commerce, Department of State.

bounty of 25 sen (about 12 cents) per ton for the first 1,000 knots run and one-tenth of the same rate for every additional 500 knots.

The Japanese Empire has no Government agencies in other countries for the exploitation of products, aside from the usual consular efforts for the promotion of trade; the Government has frequently assisted private enterprises, but to what extent is a matter of conjecture.

TECHNICAL EDUCATION.

Technical education is receiving substantial assistance from the Government in the following institutions: Tokyo Imperial University, Tokyo; Kyoto Imperial University, Kyoto; Tokyo Industrial School, Tokyo; Tokyo Fine Arts School, Tokyo; Sapporo Agricultural School, Sapporo; Artillery and Engineering School, Tokyo; Mechanical School, Tokyo; Tokyo Merchant Marine School, Tokyo; Osaka Merchant Marine School, Osaka; Hakodate Merchant Marine School, Hakodate; Tokyo Post and Telegraph School, Tokyo.

It is difficult to estimate the influence these schools have exercised in stimulating the growth of technical industries, increasing the amount of exports of manufactured products, and improving the quality of the same. It would appear, however, that the chief result has been to turn out skilled workmen able to use labor-saving machinery, and, except as this may influence the cost of production, the gains in exports are largely the result of private enterprise.

GENERAL REMARKS.

The Government has signally aided the development of foreign trade by bounties and subsidies, and this would seem to be its distinctive policy in this line. This policy has been pursued by the Imperial Government since the year 1870, and seems likely to continue, as its results are understood to be satisfactory.

Industrial and commercial circles in Japan are close observers of the foreign-trade methods of the various great manufacturing and exporting countries, and, it would appear, have successfully adopted in many instances a similar policy.

DEVELOPMENT OF THE FOREIGN TRADE.

[From the Japan Gazette.]

In the ninth session of the Diet, the Government introduced a bill for the disbursement of 60,000 yen (\$29,880) per annum for five consecutive years, commencing with 1896, for the purpose of developing the foreign trade. As a first step, the higher council of agriculture, commerce, and industry was opened, but it was closed without any practical result. Second, the councilors and experts of the department were dispatched to Europe, America, and China to inspect the condi-

tions of trade in those countries; but the result of their travels has been of little benefit to the business men. The graduates of the higher commercial school and those who had similar qualifications—seven persons in all—were sent to Great Britain, the United States, Germany, France, and China, to prosecute their studies at Government's expense. What will be the result of this remains to be seen. Fourth, samples of Japanese merchandise were sent for exhibition to various foreign countries. This step seems to have attracted the attention of foreigners to a slight extent. Fifth, the industrial school has been requested to make model works of art, with the object of improving articles of merchandise. Sixth, arrangements have been made to keep those concerned informed of the conditions of foreign markets. It appears, however, that no good has as yet been derived from the last two projects. On the whole, no visible benefit has been reaped from the adoption of the above-mentioned methods, though 120,000 yen (\$59,760) have already been expended. The money has been wasted through the want of proper superintendence and carelessness in the selection of officials. It is to be hoped that in future the fund will be appropriated in a more business-like manner.

NETHERLANDS.

The consul at Rotterdam, Mr. Listoe, writes:

This report must for obvious reasons be short and not very satisfactory either to the writer or to the parties in search of information. In the first place, statistics are difficult to obtain; and, second, the Dutch home industries are not very extensive, and afford but a limited opportunity to the Netherlands to take rank among exporting nations.

As will be shown below, this is an agricultural and not a manufacturing country, and the Government offers but slight encouragement to manufacturing and exporting interests. Except in horticulture and agriculture, I am inclined to think that there is a decided lack of industrial ambition.

In reply to the questions asked by the instruction, there is a separate governmental department which, together with the care of the water ways, has charge of the commercial and industrial interests of the country. The waterstaat bureau of this department has supervision of rivers and towpaths, canals, roads, ferries, marine and harbor works, river navigation, police and toll regulations, and issues statistics on inland navigation.

The commercial and industrial bureau has control of affairs relating to commercial law, the consular reports, the chambers of commerce, industry, and labor, and also the general entrepôts (bonded warehouses). Further, it has supervision of foreign trade and navigation; of conveyance of emigrants across and from the country; of public means of transportation by rail, water, and road; of inspection of factories, weights, and measures; of regulations regarding exhibitions; and it issues the statistics of national industries.

MERCHANT MARINE.

The Government gives no support to the merchant marine, except that the municipal schools of the cities of Rotterdam, Harlingen, Terschelling, and Helder each receive a small subsidy from the Government for the purpose of maintaining a department where navigation is taught.

FOREIGN AGENCIES, EXPOSITIONS, ETC.

No foreign agencies are maintained for the exploitation of products of the country, except that the Netherlands consular service gives periodical reports and advice. In 1896, a grant of 300,000 florins (\$120,000) was appropriated toward the promotion of Netherlands' interests at the Paris Exhibition in 1900.

The official estimates of expenditure in the years 1897 and 1898 for education, etc., were:

For—	1897.		1898.	
	<i>Florins.</i>		<i>Florins.</i>	
Government middle-class schools.....	734,230	\$293,692	753,080	\$301,232
Polytechnic schools.....	480,693	192,277	521,965	208,786
Technical schools.....	99,450	39,780	100,200	40,080
Agricultural and horticultural schools.....	429,428	171,771	464,000	185,600

It is required of every community that it shall provide for the education of children in accordance with its requirements, the Government exercising the control. Every community of any size has its technical schools and night schools, the direct supervision thereof being intrusted to a local committee of practical men. The cost of these schools is borne by the community, a certain limit being fixed for the school fees.

The influence of this State-directed instruction, in stimulating the growth of technical industries, is difficult to estimate. The Netherlands being principally an agricultural country, industries are not of such importance as in other nations, and but little support or encouragement seems to be offered by the Government toward extending them. While in several provinces, notably Overijssel, North Brabant, and South Holland, there is considerable manufacturing (linen weaving, works in earthenware, gold and silver ware, manufacture of gin, cigars, and glass bottles being among the industries), it can hardly be said that this is owing to any encouragement from the Government; and exports to foreign countries are inconsiderable. The absence of patent laws may facilitate competition with foreign producers in supplying national demands but few Dutch manufactures find their way abroad.

GENERAL POLICY.

I have been unable to discover that the Dutch Government has any distinct policy in the development of foreign trade, and leading business men and others who ought to be well posted agree in declaring that if the Government has such a policy it is manifested in a negative way. With the exception of the traffic with her own colonies in the Indies and with South America—which is very extensive—the export of the Netherlands is, as has been stated, very limited, and it does not appear that the Government in any direct manner or by any decisive policy is exerting fostering care over the trade with foreign countries. Holland is practically a free-trade country, the average import duty being only 5 per cent ad valorem; and, though one or two of the provinces most interested in manufactures have at times raised their voices for protection, the Government has steadily insisted on free trade.

The policy of the Government shows no changes in the past few years. The Government has directed its energies toward protecting this low country against the ravages of the sea, by building and maintaining dikes and canals. The latter have been extended and improved in many ways, whereby the navigation of the inland water ways has been greatly facilitated.

It may perhaps be stated here that during the past twenty-five years the Government has given special attention to the education of the rising generation and to education in all its branches.

The sentiment in trade and industrial circles towards competitors in foreign countries must be said to be friendly and hospitable. Holland being almost exclusively an agricultural country, with no mineral resources and no forests or coal mines to furnish fuel, has, as before stated, only limited manufacturing and industrial interests, and the people are to a great extent compelled to rely on foreign countries for many classes of goods. There is, probably for this reason, but little jealousy manifested in trade circles towards foreign manufactures, and the importation of many articles is in fact welcomed by the traders as well as by the people. German and Belgian machinery, tools, and other industrial products find a ready market here, and all the American manufacturers have to do in order to get their share of the trade is, in my opinion, to send active and energetic representatives to introduce their wares and appoint local agents for the sale of same.

I would call the special attention of all interested to this latter point of advice. It has been the custom of many American manufacturers, when disposing of European territory to agents, to include the Netherlands in some German agency. Probably they think that this country is too small to warrant the establishment of separate

agencies here. If the Holland trade is worth having, it is quite safe to say that it can only be obtained by intrusting the agencies to natives, or at least to residents of the country. There are two reasons for this. One is that while Holland is a small country, the Hollanders have a great deal of native pride, which even extends to business matters and makes them protest against being considered an annex to another territory. Another reason is that German or other agencies pay but little attention to the Netherlands trade. They take, of course, what they can get, or what may naturally come to them, but they expend no money or energy towards procuring business for or advancing the interests of the American houses they represent.

RUSSIA.

Vice-Consul-General Magnus, of St. Petersburg, says:

The Russian Government has a special department devoted to the interests of commerce and industry, called the Department of Manufactures and Trade, which forms part of the Ministry of Finance. This department has a special section for collecting statistics of domestic industry and commerce.

The Government extends no support to the merchant marine of this country, except that the large Black Sea steamship company receives a yearly subvention.

For the exploitation of Russian products in foreign countries, special agents attached to the legations in foreign countries are appointed. There is also an exhibit of samples of Russian products and manufactures at the consulate-general in New York and similar exhibits in Paris, managed by private persons, but under the protection of the Russian Government.

In order to develop technical education in this Empire, a number of special schools have been established in the large cities, as well as large technical museums. During the last ten years, technical education has made such progress that the construction of railroads, of large mechanical works, of complicated shipyards and machine factories has been in the hands of Russian engineers. The Russian machine works are not yet able to fully supply the want of the country; but no doubt, within a short period, Russia will be almost independent of foreign aid in this respect, as every year large and well-equipped works, supplied with an abundance of capital, are erected in this country, mostly by English, German, Belgian, and French capitalists or stock concerns. The success of these works is guaranteed just now by the large Government orders for supplies for the Siberian and other roads, and also by the great demand for machinery of all

kinds throughout the country. The high import duty affords protection to all such undertakings. So far, Russia has not been able to export any machinery or products of technical industry, but this industry is progressing rapidly. There is still a decided lack of skilled labor, while there are plenty of able and well-educated engineers.

The Government aids the erection of industrial establishments in all parts of the country, with the view of making Russia independent of foreign countries, decreasing the import of foreign goods, and sustaining home industry.

The present policy differs from the one pursued in former years in the following respects:

Most of the large stock concerns for manufacturing machines, railroad supplies, etc., which have come into existence during the last four or five years, are controlled by foreigners who formerly were almost prohibited from investing their money in this manner. They were even prohibited from holding shares in any mines, while now this is tolerated, on condition that the controlling power in Russian mines, as well as the management of the same, shall be in the hands of Russian subjects.

SWITZERLAND.

The following was received from Consul-General Richman, of St. Gall:

The Federal Government of Switzerland, under authority granted by the representatives of the Swiss people, exercises a marked influence in the promotion of the trade of Switzerland with other countries. To this end, a special department, called the Department of Trade, Industry, and Agriculture, has been created. According to a decree of the Swiss Federal Council, issued in 1885, this department exercises authority in the following matters:

- (1) Promotion of trade in general.
- (2) Preparatory work for the conclusion of commercial treaties, and also cooperation in regulating and fixing customs tariffs.
- (3) Issuing the Swiss Trade Journal (*HanJelsamtsblatt*).
- (4) Adjusting disputes in international trade.
- (5) Licensing commercial agents.
- (6) Controlling trade in gold and silver ware.
- (7) Exhibitions (with the exception of school and art exhibitions).
- (8) Assisting industry and trade in general.
- (9) Labor laws, sick and accident insurance.
- (10) Industrial and commercial education.
- (11) Furthering agricultural interests in general, and contributing to agricultural investments.

(12) Education in agriculture.

(13) Police regulations in cases of contagious diseases among animals.

(14) Precautions against danger in the case of agriculture.

STATISTICS.

As regards the control which the Swiss Federal Department of Industry exercises in the matter of collecting statistics of domestic industry and foreign commerce, it may be said that such control is extensive and the statistics gathered of wide scope. This remark, however, does not apply to house industries, which, despite the modern tendency toward concentration in factories, are still carried on to a great extent in Switzerland. Thus far, this department has not attempted to gather statistics regarding industries carried on in houses. With regard to other industries, some idea of the scope of the work performed by this department may be obtained from a partial enumeration of the subjects embraced in the volume of the federal census, issued in 1894, covering the period from 1888 to 1894, of which I inclose a copy:*

Total trade population, male and female, by Cantons.

Persons whose occupation can not be definitely stated.

Persons engaged in promoting the yield of natural products.

Persons engaged in improving the products of nature.

Persons engaged in trade.

Persons engaged in establishing commercial routes and ways.

Persons engaged in public administration, science, arts, etc.

Persons engaged in mining, etc.

Persons engaged in agriculture and cattle raising.

Persons engaged in forestry, hunting, and fishing.

Persons engaged in the production of foods.

Persons engaged in the production of clothing, etc.

Persons engaged in the production of building materials.

Persons engaged in the production of textiles.

Persons engaged in the production of chemicals.

Persons engaged in the production of metals, machinery, and tools.

Persons engaged in the manufacture of books, paper, etc.

Persons engaged in supervising the public health.

Persons engaged in church and educational professions.

Persons engaged as millers, bakers, and confectioners.

Persons engaged as cheese makers and makers of other artificial foods.

Persons engaged as milk dealers, butchers, brewers, etc.

* Filed for reference in the Bureau of Foreign Commerce, Department of State.

The foregoing list might be indefinitely extended, but enough has been given perhaps to show the extreme minutiae of the statistics contained in the volume above referred to. At the end of this volume is a series of maps showing the division of the country into Cantons, and of the Cantons into districts; also showing the distribution of the population in the textile and watch-making industries.

This same Department of Industry, through its customs branch, issues an elaborate yearly volume entitled *Statistics of Swiss Commerce with Other Countries*, the subjects included being: General commerce; special commerce with other countries; division of imports and exports (by countries) into the classes alimentary products, raw materials, and manufactures; commerce in so far as the same deals in articles in transit, on the frontier, and articles returned to other countries. This volume of statistics is accompanied by an annual report of the customs department, in which the fluctuations of foreign trade for the year are carefully given, causes assigned, and suggestions for the improvement of trade offered.

FOREIGN AGENCIES, EXHIBITIONS, ETC.

Switzerland maintains no agencies in foreign countries for the exploitation of products. It has no warehouses or permanent exhibits. Attention, however, is given to participation in international exhibitions, and appropriations are made by the Government for this purpose. Thus, Switzerland was an active participant in the great American exhibitions at Philadelphia in 1876, and at Chicago in 1893.

TECHNICAL EDUCATION.

Industrial and technical education in Switzerland had its origin in the several Cantons. In the eighteenth century, a number of industrial schools of various kinds came into existence. In the constitution of 1848, under which Switzerland really first became a united country, there was a provision authorizing the creation of a Swiss university and polytechnical school. In 1854, the polytechnical school was established in Zurich. This institution was a success from the start, and has been rendered constantly more and more useful through the interest in technical education aroused in Switzerland by the international exhibitions at London in 1851, Paris in 1855, London in 1862, Paris in 1876, Vienna in 1873, Philadelphia in 1876, and Paris in 1878. The Polytechnicum consists of seven distinct branches, with courses in architecture, civil and mechanical engineering, chemical technology (including pharmacy), agriculture and farming, philosophical and political science. There is also a normal school. There are forty-five professors and thirteen assistants, and the annual expenditure for support is about \$100,000.

With the year 1884, began the most marked movement in favor

of industrial education which Switzerland has yet seen. It was then proposed that the Government purchase the existing cantonal institutions for technical education, and thus bring them all under federal ownership and control. After much discussion, it was deemed wiser to adopt the plan of federal subventions to cantonal institutions, and accordingly, on the 27th of June, a decree was issued by the Federal Council in which the details of the plan were set forth. The kinds of schools to which federal aid might properly be given were designated as schools of artisans, professional schools, schools of design, schools of arts and trade, schools of samples and models, and industrial museums. The amount of aid for any school was fixed at half the annual expenses. The Federal Government also consented to bear half the expenses of persons wishing to qualify themselves as instructors in industrial schools. In 1885, the Government made further rules whereby its supervision of industrial schools was provided for and rendered effective by a board of visitors or inspectors, called the college of experts. In 1891, it was arranged that each year two members of this college should go abroad, for the purpose of visiting and reporting upon foreign technical schools and industrial exhibitions. The confederation furthermore provides for courses of instruction in industrial work for the masters of industrial schools, to be held each year at some principal center of industrial education. It also subventions various industrial publications. The number of schools throughout Switzerland which received subventions during the year 1894-95 was two hundred and six. During the year 1896, fifteen new establishments applied for federal aid.

It might also be mentioned that, in 1895, the Federal Government arranged for aiding schools for the instruction of women in household economy and in technical work adapted to their sex. In 1894, the total sum expended by the Federal Government in subventioning industrial schools was 3,672,196 francs (\$708,733).

The influence which this federal aid to industrial schools has exerted in Switzerland in stimulating the growth of technical industries, in increasing the amount of exports of manufactured products, and in improving the quality of such products has been, according to the testimony of all, very great indeed; but even the department of industrial education finds it impossible to state in figures or other exact terms the extent of this influence.

GENERAL POLICY.

It is stated by the industrial department that the policy of the Swiss Government for the development of foreign trade since 1848—that is, since Switzerland really became a nation—has been one of as

little interference as possible with personal initiative. It has been the aim of the Government (it is said), in its legislation and decrees, to place as few hindrances as possible in the way of trade and commerce.

During the past twenty-five years, there has been no material change in the policy pursued by the Swiss Government toward trade, excepting the adoption of the plan of federal subventions to industrial schools. It might also be remarked that there has developed of late years in Switzerland a tendency, in some quarters at least, toward higher customs duties; but in explanation of this, it is stated that this tendency has arisen from the conditions, unfavorable to Swiss trade, created by the adoption of higher and higher duties by surrounding nations.

It may truthfully be said, I think, that Switzerland maintains her present system of customs duties chiefly as a source of revenue, the protective feature being held, so to speak, as a weapon of defense against the ultra systems of competitors. In the future, as in the past, Switzerland may be expected to rely for commercial success upon her economy, industry, and mechanical skill.

AMERICAN BICYCLES AND VEHICLES IN ENGLAND.

The following extracts are from the annual report of Consul Halstead, of Birmingham, which will appear in *Commercial Relations*, 1897-98:

To cover the various phases of the bicycle business in an interesting way, and at the same time preserve a fair degree of accuracy, I have had recourse to the interview and have talked with an American who, as an agent, has had a large experience in handling American goods here; I have seen an English journalist connected in an important capacity with one of the most enterprising British bicycle papers; and, finally, have obtained the views of a bright American seller of sheet-steel stampings and other bicycle parts.

The agent of American bicycles thought it necessary to give an outline of the history of efforts here in this line, to show the present condition of the market in England. He says:

A few years ago, American bicycle manufacturers, knowing that with the use of up-to-date machinery and modern methods their manufacturing costs were very low, and finding the home market unsteady, owing to overproduction, decided to invade foreign markets.

I am one of the first of the many American bicycle salesmen who were sent abroad, and believe I know something about the history of the trade.

Some of our manufacturers went about the foreign trade in a systematic, business-like manner, and worked on most of the lines which had been successful at home. They established branch stores, putting competent men in charge, advertised liberally, and quoted prices in pounds, shillings, and pence. Their stores were repair depots, where any part could be repaired or even replaced if broken. Other manufacturers, as you know, desired only to dispose of surplus stock, at any price obtainable, and recklessly accepted agents of various degrees of financial responsibility and without reference at all to their moral reliability. Tailors, druggists, and dry-goods merchants were ushered into a trade in which they were not fitted in any way to hold the people. Catalogues intended originally for use in America were sent out here, without even the alteration of the prices so that Englishmen could understand, and with descriptions in terms not current here. Hangers are known in England as bottom brackets, drop forgings are called stampings, etc. People here are afraid of wooden rims—afraid they will break, in the first place, and sure that damp weather will affect them in the second—and they simply will not have them. They do not believe in the single-tube tire, and the fact that 70 per cent of the riders use them in the United States is argument enough for not using them here; and the Dunlop double-tube tire company has such a monopoly and controls so many agents and bicycle repair shops that it is simply idiotic to fly in the face of the facts. The ordinary bicycle repairer not only could not, but would not, try to repair a single-tube tire; and, on account of the sharp flint, broken glass, and thorns on the roads here, punctures are far more common than in the United States. If the single tube received a large cut, it had to be sent to London to be vulcanized; and in case of a mere puncture, if the rider could not repair it himself, he was in as bad a fix.

The few far-sighted manufacturers supplied steel rims and detachable double-tube tires. The whims—or, more properly, the wishes—of the people were regarded by manufacturers who came to stay, as were also their desires in regard to brakes, mud guards, and even gear cases. I would not think of riding here without a mud guard, as I have no more liking than other people for being splattered. It is muddier here than at home, and it is a stickier and sloppier kind of mud, and, not having so much sand, it does not crumble up and break away so easily. Half the mud guards which have come on American machines are too short by 2 or 3 inches, and the mud climbs up your back.

The result is that a certain class of far-sighted manufacturers have found an excellent market here. Their machines are on a par with, or even better than, the best English machines, and sell at cheaper prices; while the others have not only ruined their own prospects and lost money, but very nearly spoiled the market for American machines by their loose ways.

There are still some American machines which I could name which should be brought here, and if well represented would sell readily, if fitted to meet the demands of the market. Many salesmen have been sent over here who were at first reluctant to comply with English wishes; but a salesman soon finds out the conditions of the market, and it is usually the manufacturer who remains unconvinced and continues, to his great cost, stubborn and even antagonistic in attitude towards his possible customer, and forgets that the buyer has the right to say what he wants.

In reply to your question about bicycle fittings, I must say that I believe with you that this is our best opening, if orders are filled promptly and with exactness. There is a good demand and ready sale for well-made bicycle fittings of all kinds—saddles, hubs, pedals, etc. Sheet-steel stampings are bound to grow in favor. Malleable iron castings are also in demand, and the high-class work of this description turned out in the United States should find a ready sale.

From the English bicycle journalist, because of his extensive acquaintance and intimate association with the trade, I sought an expression as to the present status of English bicycle manufacture as a whole, and his views confirm all I have seen in other directions and have heard from other sources. He said:

The cycle business of Great Britain for the season just closed has been very disappointing from the manufacturer's point of view. Agents had carried over heavy stocks from the preceding year, and were therefore not in a position to buy heavily, so that makers were obliged to push sales outside the ordinary circles, regardless, more or less, of the financial condition of those with whom they dealt. This has naturally resulted in many bad debts. Instead of the average being 1 per cent, as in the ordinary year, they have gone up during the season just closed as much as 5 or 6 per cent on the turn over. To put the situation in a nutshell, the only people who have made money are those who have been in a position to collect their accounts, such as the Birmingham Small Arms Company, the Rudge-Whitworth Company, New Centaur Company, and New Hudson Company.

The number of failures attributed to overcapitalization and lack of knowledge of the trade has been very heavy. Capital was attracted in the days of the boom, and many people went into the business in the same manner that they would speculate in gold mines, and the results have been, of course, disastrous.

In regard to 1899, the outlook is much more hopeful. The doubtful elements have been cleared out to a great extent, and the business will be on a much better footing. Stocks have been well reduced, and there seems to be no reason for any undue cutting of prices, as in the season just closed. At the same time, it is not to be understood that next year will be anything more than normal. The trade will have to recover slowly from the crisis which it has gone through, and those best able to judge are convinced that the following year will be far better.

The demand for 1899 will be mostly for good machines at a popular price. The day for high figures here is gone, though it lasted longer than it did in America, and, as the agent can now purchase fittings either from home or from American manufacturers, and of the highest possible quality, at prices that enable him to obtain a first-class bicycle to sell at £10 10s. (\$51.09) to £12 12s. (\$61.32), buyers are not likely to go above this.

The growth of the large concerns that manufacture fittings has been phenomenal, and this is partly to be accounted for by the inattention given by manufacturers to the requirements of agents in the height of the boom, and partly by reason of the desire of every little retailer to sell an article as his own make; it keeps his name before the purchaser, and, if the cycle turns out to be satisfactory, he reaps the benefit in additional orders.

The majority of the large manufacturers will adopt a net price list for next year, instead of the fancy figures of the previous years, and it is generally considered that this move is wise on their part.

CHANCES FOR AMERICAN BICYCLES.

A combination of circumstances has prevented American bicycles from securing the footing that they deserve in this country; but, to show the possibilities, it may be mentioned that a large American house with direct representation in London sold to a Scotch firm a short time ago 1,000 machines, to be delivered during the forthcoming season. Unquestionably, if bicycles are sent over here according to English requirements, and the tastes of buyers in the various details cultivated, there is no reason why a large business should not be done.

AMERICAN SHEET-STEEL STAMPINGS.

Sheet-steel stampings, or pressed works, as applied to lugs, bottom brackets (American hangers), and other fittings of a bicycle, are not a new feature in Great Britain, but are now being pushed hard by Americans. The fact is that the application of sheet-steel stampings to bicycle uses was first made in England, but without satisfactory results, "due," as the salesman of sheet-steel stampings says, "to the very high grade of castings made here at the time, and also because there was a failure to improve on the early stampings, which turned out badly." The British business policy would seem to be to never again touch what had once failed to give satisfaction, no matter what representations were made and exhibitions given as to improvement in methods of making it. Those who used them and whose customers had been dissatisfied did not wish to risk the reputation of their bicycles again, and, as there was no demand, there was no attempt to make better stampings. In America, however, the subject was taken up, with the English experience in mind, and persistent experiments were finally rewarded with marked success. After the steel stampings have stood every test (including the practical and convincing one of extensive and thoroughly satisfactory service), their claims to the second consideration of British bicycle traders are now being urgently presented by several well-known American firms who manufacture them. The sheet-steel parts are practically ready for the assembler, and the main advantages in their use are the reasonable prices, for they are produced with comparative cheapness, and the opportunity they offer for doing away with the great plants of machinery of the drilling and milling kind, that are absolutely necessary for the finishing of crude castings.

Even with the most careful preliminary survey and study, the introducer of a new article in a foreign market can not get all information necessary, and he must await the experience of attempting to sell before all the difficulties present themselves. The American idea of building bicycles is to get good results with the least possible complexity of parts. Some English makers seem to prefer intricacy of construction. Thus the first difficulty which arises before the salesman is that he can not quite conform to several features of the English design. This means that a machine frame set of stampings must be made up of fewer parts, several not quite applicable here being left out, and the sale is not so profitable. One part not applicable is the rear-fork end, which is furnished by the American manufacturers, and a sale is often lost because this fitting is not adjustable. The English pattern, although much more bulky in appearance, enables the manufacturer to adjust it to any height of frame, while the fitting furnished by the American is available for one angle only;

therefore, the change in the height of the frame necessitates using a different rear-fork end. The English post lug is in a single piece, and the back stays are fastened with a bolt, and, as the stays are adjustable to different heights, the angle at that lug changes, affecting at the same time the angle of the fork end. In America, three or only two angles in fork ends are kept in stock. There may be one of two results. Fork ends are cheap, and many angles may ultimately be stocked; or the American-stamped post lug or cluster, having either two, three, or four branches, as necessary, may be adopted here, and this, doing away with clamping, will also do away with so many angles in fork ends.

The great difficulty is, of course, to overcome past prejudices. While it is a very hard and discouraging work, progress is being made, and most of the manufacturers are ready to take a look at the samples—something few of them would think of doing last spring.

The next trouble is that (despite the evidence in nearly every workshop here, by the presence of American machinery, that we equal any nation as manufacturers) everything that can be classed as American is condemned, until its superiority is clearly proven. There is something equivalent to a high tariff in this fact. The initial cost of introduction here of those things which finally sell and of those which fail, if added up and distributed over several years as a charge on sales, would seem a good customs duty.

The statement that the use of an article would close a portion of a plant is frequently found to be an argument for not using it, as there are many reasons why some people would and even should prefer to keep a plant going.

There are managers who frankly admit the advantages and superiority of sheet-steel stampings, but who prefer to build machines on old lines, as there is no necessity then of their having to conduct a campaign of education with their customers, the agents, and of the agents in turn convincing the bicycle riders.

On the American side of the case, also, there are difficulties and faults, and I regret to say the same trouble frequently occurs in other lines of exports. Some stampings were sold last year, and there was delay in deliveries. While most of those who bought are buying again this year, it is only because they liked the article.

It might be well to remember that selling goods here is not an easy task. There are no notions of hospitality for salesmen, and while waiting to see the manager, their time is spent standing, not sitting, in a cold and shabby-looking area way, with no certainty but that the errand boy or the card clerk has sized them up as in his opinion of no importance, with the result that he will not deliver the

card promptly. He may even, without delivering it at all, say, "Nothing in your line is wanted to-day."

So long a time is spent at lunch in this country that the hours in which a salesman can do business are few. This means a great cost in selling. So much time is consumed in trying to see the buyers of houses, who frequently assert their importance in that way, that few sales can be made in a day, and this means further cost. In English trade, this has required an increase in the number of commercial travelers, and, as only so much money can be afforded in selling goods, it has also caused lower salaries and cheapened the class of men. The American salesmen have found their ingenuity tested to the utmost, but frequently manage to escape the petty buyer and his small ways and see the head of the house.

BAD PACKING.

About six months ago, when bicycle prices were higher here than they are to-day, a rich and reputable firm of Birmingham merchants with a big continental trade ordered, at a figure considered high at home, two hundred American bicycles for shipment to a port in Russia, where the shipment was to be divided and forwarded to several different points. Men's and ladies' wheels were wanted in a stated proportion and, of course, with different frame heights, and both maroon and black enameling was desired. It was directed that six frames be packed in each frame case and six wheels in each wheel case, and that a combination system of lettering and numbering be adopted, so that sets of six bicycles of any kind could be identified. If A meant diamond frames and men's wheels and B drop frames and ladies' wheels, and X indicated maroon enamel and Y black, and each set of six frames and six pairs of wheels, though in their separate cases, had on these two cases corresponding numbers, all would be well and simple for the division and distribution. But the American manufacturer—and the concern is well known—did not rise to the occasion, and with one exception not a numbered and lettered case corresponded, and no purchaser got just what he wanted. Twenty-six-inch wheels were coupled with shipments of frames with 28-inch front forks and fitted with 28-inch mud guards, making it impossible for the brakes to reach the tires by over an inch; maroon were mixed with black parts; pedals were packed so badly they arrived with broken centers, spindles, or cones; and it is stated that the chains were actually tied around the saddle post lug, and so loosely that they had swung around among the frames and chipped the enamel.

All these points relating to the bad packing are given in the report of the Russian agent and depend upon his word, but I am told the

American manufacturer does not deny that such mistakes could have occurred, and is willing to take in payment whatever the English merchants will give him.

In addition, however, there is a charge of bad faith in shipping goods not up to an honest standard. It is held that there is an incrustation which, having set up underneath the enamel, indicates that the frames were rusty before the enamel was put on. I am asked, as consul, to inspect one of the machines which were shipped here from Russia, and will do so. It is also claimed that old-pattern frames were sent, and that catalogues clearly show that the frames were second grade of the previous season, equivalent to a third grade of the present.

I can not prove or disprove any of these statements, but it must be patent to any American that with this kind of a story current, even people anxious to purchase hesitate about paying cash against documents. If true, in addition to being an example of the cost of careless packing, it is a good instance of the danger of sending the poorest stuff abroad. The fact is, the foreign test is severer, and no merchant or manufacturer can afford to send out anything but the very best.

UNFORTUNATE EXPORT METHODS.

An American salesman living here was engaged by an American firm to handle its bicycles in England. As he learned afterwards, the firm was regarded as "sharp traders," but the point of the story is that they overreached themselves, and, of course, hurt good honest American trade generally. This salesman had not been home for a couple of years, and was not, in consequence, an up-to-date American, and believed his employers when they said the sample bicycle was their 1898 model. He states that he placed 450 wheels with small dealers at \$60, a big figure, and he got it because the wheel had borne a very good reputation; but before the deliveries were all completed, a few samples of the real 1898 model arrived in England, and an English bicycle paper happened about that time to print the fact that the firm in question were selling their 1897 model in the United States at retail for \$30, and that the machines were being sold at that price extensively throughout the United States. The 1897 models which the salesman had sold here, believing they were 1898 models, were promptly returned, and the firm had hurt not only themselves, had lost the respect of their salesman, but had injured the American bicycle trade generally. By a correct representation and a reasonable price, so many wheels might have been sold here that there would have been no need for selling wheels at retail for \$30 at home.

A large American bicycle-lamp concern, manufacturing a first-class article, was so anxious to introduce this lamp into Great Britain

that, like many another would-be exporter who is not prepared to handle such business properly, it accepted the offer of a big London jobbing house to buy 20,000 lamps at a very low or so-called introductory figure. In this lamp, a felt and not a knitted wick is used, and a felt wick requires the very best quality of petroleum, with which this lamp is just about the best oil lamp made for bicycle use. It is, however, very difficult to buy good petroleum in England. Petroleum oils have fancy names; the fancier the poorer. The name petroleum is almost unknown, and coal oil and kerosene unheard of. Now, to make this lamp a success, there was needed a campaign of education, and the purchasers would have had to be taught to demand and insist upon White Rose oil, I think it is—a high grade, refined American petroleum—and be impressed with the absolute necessity of taking no other; for many shopkeepers here will never sell you anything you want, but always insist on selling you something else, until they realize that you will have only what you asked for. The big jobbing house did not employ a campaign of education and had most of the lamps left on its hands.

Early last spring—just a year too late—the lamp manufacturers determined to enter into a well-organized campaign in behalf of their lamp. They had an 1898 model which was superior to the 1897, but the jobbing house demanded that they take back the 14,000 lamps they had left out of the 20,000, and fought them when no attention was paid to their demand, and wherever the Americans went they found the 1897 model advertised at 50 per cent, and they discovered that the 6,000 lamps which had been sold had proven unsatisfactory because bad oil had been used; and the American concern had to give up British trade. This is a case of a good business spoiled by a bad start. If they had put their men in the field the year before to cooperate with the jobbing house, there would have been a great success.

As an illustration of the different point of view here, there is the case of the acetylene lamp. Our people buy a novelty because it is a novelty, and everybody wants to try it. It is quite the reverse here, and most of the people would prefer that somebody else do the testing. A manufacturer of a good acetylene bicycle lamp tells me of one big city in America where there were more acetylenes sold last summer than in the whole of Great Britain.

AMERICAN VEHICLES.

At the royal agricultural show held at Birmingham last summer, there was an exhibit of American vehicles, and there seemed to be a fairly ready sale for those traps which approached in appearance the same article of British manufacture. The sales were due, first, to low prices and, second, to some clever American arrangement or

other by which the vehicle could conveniently be altered and adapted for various uses. The salesman said that to sell American vehicles they must not be too light, and that a four-wheeler positively must cut under, and even a three-quarter bar would not do. The Britisher goes to the extreme in his demand for solidity of construction, and this strength must be apparent to the eye; to fulfill the desire of a customer here there must be bulk, and all this means weight, and weight is wanted. It is true that the Countess of Warwick very daringly drives what is considered here to be a spider-wheel buggy, but it is the wonder of all Warwickshire, and she will not have many imitators.

There are many more two than four wheeled vehicles in use in this country, and people are satisfied with these and accustomed to the easy way in which they turn. Both city streets and country roads are, as a rule, much narrower than in the United States, and an Englishman does not wish to trust himself or his wife or children in a vehicle which does not turn freely; so a four-wheeler must cut under. Some of the modifications for the English market in the American exhibits were not, to my mind, satisfactory. The lines, I thought, were not good, and certainly some of the modified vehicles were not as graceful as the true American type or as handsome as the thoroughly British trap. Someone with artistic taste should redraw them, and the American buggy top, which would be so useful in this climate, should be adapted in some better way to the two-wheel carts. They have the balancing of a two-wheeler down to a nicety here, and must have, if there is consideration for the horse; and the difference of balance between buggy top down or up is very great, and some counterbalancing device is necessary. There is nothing here to compare with some of the light spring wagons used in the American cities, and they might find favor, as well as two-wheel delivery carts of an attractive type. It is my belief that the American carriage builder who will make exact copies of several models of good English styles will find a ready sale for them, if willing to accept a reasonable profit. Let him depend upon the cheapness of his wood, the low price of the iron parts, due to the use of up-to-date machinery, and let him win his way in this market by good construction, and leave the introduction of American styles or modifications and improvements on British styles to come later and gradually.

CARRIAGE PARTS.

An American salesman handling carriage components told me, several months ago, when I saw him last, that he had sold all the wheels his house could deliver; but they were, it should be mentioned, of a design suited to British taste. He claimed he had

sold carriage springs in Sheffield, black enameled cotton for carriage hoods in Manchester, and iron vehicle bolts in Birmingham. This may have been exaggerated, but he certainly had been selling something here successfully. He says he studied English wants before he attempted to make sales, and insisted that his several principals should do business on English lines.

BASKET WORK.

Basket work is the fashion in England now for the bodies of "perambulators," or, as we call them, "baby carriages," and in this there is the chance to sell the body parts, if our basket workers who use machinery for basket furniture care to turn their attention in this direction and are ready to make special designs. One American concern, which was sought but did not seek, has received an experimental order of the kind.

There are merchant firms engaged in international trade, with warehouses and offices in London and Berlin and connections in many cities on the Continent, which, while of high standing financially, are simply business wolves; and there are many good American articles for which they have the exclusive agency. A very necessary and reasonable consular regulation prevents consuls from giving reports on the standing of houses; but there is nothing to hinder an American firm, when making arrangements with a foreign concern, from asking what other American articles are handled, and then an inquiry can be made of the American firms manufacturing them as to the treatment they are receiving. Some houses, run on honest business principles, have too many American articles; so many they can do justice to none. Why not ascertain definitely how many "American specialties" are being carried and whether they are dealing in the goods of competing houses? Or, if our firms know what their agents were handling last year, why not find out this year how many articles have been added to that list?

Suppose an American firm in a general line of manufacture is making a superior article requiring expensive special machinery. It is reasonable to assume that a foreign manufacturer in the same general line, having important business connections, knowledge of credits, etc., and salesmen on the road, will be glad to handle the special article of the line, and can do it better than anybody else; and that, the advantage of the connection being mutual, he will contract not to compete in the manufacture of that article, provided he gets good terms. This foreign manufacturer will thus avoid buying machinery, and can afford to finance each shipment against documents from the moment it leaves an American port. I am bringing two manufacturers together in that way now. The arrange-

ment will probably be made, and I think the American manufacturer will be surprised, when he gets the communication forwarded him, to learn how easy his new foreign business will be. Of course, there are many points to be guarded, and a carefully worded contract will be necessary. In this case, an American salesman will probably be put in the field for a year to conduct an educational campaign.

AMERICAN GOODS AND TRADE METHODS IN ENGLAND.

The following extracts are from the annual report of Consul Halstead, of Birmingham, which will be published in *Commercial Relations*, 1897-98:

The war with Spain, and the consequent increase in the circulation of the newspapers of the United States, causing a greater consumption of paper, had an effect on the sale of American paper in this country. Paper was temporarily too high.

Sporadic attempts have been made to sell American paper here, but the introductory efforts were too costly for individual action, and there was always the discouraging factor that sharp competition from home would follow if individuals were successful.

On account of the formation of the paper trust in the United State, there can now be that combined action for trade here which should mean successful sales in competition, particularly, with German and Norwegian paper. It was found in the United States that it was cheaper to stand the wear and tear on unprotected rolls than to protect them with wooden ends or other devices. There has been, however, great loss on unprotected rolls sent by steamships, and it has been impossible to keep stevedores from jabbing their hooks into the rolls, and to prevent the rolls from being smashed and cut and the ends bruised against hatchways, stanchions, etc., in lowering paper into the vessel holds or elevating it at the docks. The Norwegian paper is beautifully protected. The paper trust, with a special export department, can devise proper protective measures; and it can not only make contracts for low freight rates, but can compel the steamship companies to enforce care in loading and unloading.

Last year, a New York paper merchant made a contract with one of the biggest London consumers of white news paper for 100 tons a month; but with the best care he could give it, he found the waste so great he had to abandon the export business. In the first place, there was damage to the depth of 2 or 3 inches on each roll of paper;

in the second place, his rolls were not wound truly, and the consumer complained that the print waste was too great, as the "crooked" roll made the tension uneven and the ribbon of paper snapped so often. On a quadruple press, each break might mean from 80 to 100 eight-page papers in the machine itself and in rethreading. In the third place, the paper, while considered heavy and too soft at home (it would, in fact, have been rejected as too spongy and as unsuited for papers printing fine cuts in both reading matter and advertisements), was thought too hard and brittle here.

All these points the trust can look after and correct. It can protect the rolls for foreign shipment or enforce more care in handling. It can select for export rolls that are true in winding, or it can attach to presses at its own expense a device which will correct irregularity in winding. This device is simple. The rolls are run free in loose bearings, and a tension arrangement is attached separately and closer to the press. Rolls are not only irregularly wound sometimes, but are knocked out of shape in shipment. Finally, the trust can make the exact kind of paper wanted here, or it can persuade the English pressmen to use the tympan sheet that is employed everywhere at home, but not here; and for fine fast printing, this tympan sheet has a decided effect. On fast presses, the tympan sheet was originally used to save and keep clean the blanket on the second impression cylinder, and with a short stop it can be renewed for every 20,000 papers printed; and it has a smooth surface. The English pressman washes his blankets, and who ever saw wool washed so that it would retain its smooth surface. The blanket is sure to buckle, and good printing can not be done with it. Hard packing is succeeding so well in the United States that even the blanket is being abandoned as unnecessary.

The American pressman aims to do surface printing with light touch, using freely running or fluid ink and with ink fountain compartments thumbed loose or close, according to depth of color wanted on any portion of a page. The English printing "machinist" insists on so heavy an impression that it is almost embossing, and the depth of color—very deep—must be the same clear across the page. Many still use wet paper, or rather the paper comes damp from the mill, and very few establishments have their own wetting machines. The trust may persuade them to run dry paper or can even, with its resources, profitably provide wetting machines free of cost to customers.

While the English printer will not use our hard, highly finished paper for fast newspaper printing, he reverses the conditions when it comes to fine illustrated books and periodical printing. Then, he wants a hard, solid, sheet-iron kind of paper, which is so harsh that

it destroys, after a couple of thousand impressions, the delicate lines of half-tone and other fine-line cuts. He rejects with scorn our mellow and soft but beautifully finished book or magazine paper, and expresses his wonder that he does not get as good results as we do. He lays it to our engraving methods, and within a year and a half the best engraving establishments in London have been fitted up with American engraving machinery and in some of them American engravers are employed. To see that great improvement has been made, one has only to compare the files of the best illustrated paper to-day with those of two years ago, but before our standard is reached, mellow paper must be accepted and the pressmen must give up their idea that embossing, so that the impression can be felt on the other side, is doing good printing. The paper trust can effect this if it wishes

In the paper trade, it has been long known that the British custom house officials, in their zealous quest for contraband spirits, were destroying so much paper in each shipment that it was almost an equivalent to a high duty. I would hesitate, as consul, to deal with this side of the question but for the fact that so loyal a British paper as the London Daily Mail has recently done so. The facts are that the British custom-house official bores gimlet holes through rolls of paper, on which there is no duty, on the theory that concealed spirits, on which there is a duty, would leak out if in oiled skins, or if in glass the resistance to the long, thin gimlet would be felt. The idea is to bore 1 per cent of the rolls, but there are few shipments of 100 rolls, so the percentage runs much higher. In the necessarily small shipments of fine, mellow magazine paper, worth 5d., 6d., 7d., 8d., 9d., or 10d. (10 to 20 cents) a pound, the boring is one in four or one in five rolls, as I am informed by an American paper salesman, and it is a dreadful destruction of good property. These gimlet holes are just as apt to turn up in the illustrations, when the paper is printed, as in the reading matter, and, as the roll unwinds, with its constantly diminishing circumference, the frequency of the holes increases. Recently, a portion of these facts became public because the custom-house experience of a new publication in Cambridge, which had bought an American press and American paper, came to the knowledge of someone on the London Daily Mail, and the following article tells the story:

[From the Daily Mail, October 22.]

A QUEER CUSTOMS SEIZURE—FUNNY CASE OF A CAMBRIDGE JOURNAL'S PAPER.

An instance of custom-house methods in London which is amusing, except to the sufferers, has just occurred.

A new daily paper—the Cambridge Gazette—ordered from the Condor Agency, 5 Bridewell place, E. C., a "multipress" printing machine and some paper, and

the order was sent to New York. The paper was late in getting to the steamer, so that the machinery came by one steamer and the paper followed by the next.

The press was duly passed through the customs, but the webs of paper were detained by the customs authorities at the Albert Docks.

Mr. Stone, the managing director of the Condor Agency, went down to the docks and was informed that before the customs would release the webs of paper they would have to bore through them to see that nothing contraband was concealed within. Mr. Stone pointed out that to bore the paper would ruin it, and after some argument the customs people took their "spits" and ran them down through the core of the webs at each end. But the two spits being only 25 inches long each and the webs being 60 inches long, there obviously remained 10 inches in the center which had not been reached. The customs people seem to have suspected that the webs had been purposely constructed of a length that would defy their "spits" to reach the centers, and that the centers therefore must be composed of tobacco. They seized the paper and told Mr. Stone he must make formal application to the board of customs.

Mr. Stone accordingly wrote to the board to assure them the webs contained nothing but paper, to be converted into newspapers for Cambridge, and he suggested that if any suspicion remained the board should depute an officer from the customs office nearest to Cambridge to go to the newspaper office and watch the webs being converted into newspapers. The reply was as follows:

"OCTOBER 26, 1898.

"GENTLEMEN: Re your application of 25th instant—rolls of paper ex *Menominee* removal to Cambridge. The board's order is, 'Granted in charge of an officer at applicant's expense and under official seals.'

"Your obedient servant,

"J. PARKS."

On Saturday, Mr. Stone went to point out to the customs people that the paper would take some six weeks to exhaust, and that the cost of an officer's fare to Cambridge and hotel bills for six weeks would be pretty expensive. But the officials were obdurate. Nothing else would satisfy them.

Mr. Stone next suggested that they should pick one of the webs—the choice to be left to the customs, of course—and bore through that. He was prepared to submit to the ruin of one web, in order to get the rest of the paper released. This suggestion was declined.

"Then pitch the whole of the paper in the river, and be done with it," said Mr. Stone, greatly disgusted.

"We can't do that," replied the customs. "It is not our business."

Mr. Stone's company should be well known to the customs as a trading concern, for it receives from two to sixty cases on every steamer of the Atlantic Transport Line; and it is regularly invited to subscribe to the stevedore's regattas, the dock-yards' regattas, the dock laborers' regattas, and the football and other clubs in connection with the docks. But the company, for all that, can not get its paper, and the customs won't throw it away.

Do incidents like this throw any light upon the statement we published on Saturday, that New York has just passed London and has become the first seaport in the world, the position London held for centuries?

The Daily Mail of November 4 states that the customs department has reconsidered its action and given orders for the delivery of the paper, adding that in any future similar case, if notice of intended importation be given, arrangements will be made for dealing with it with as little delay and trouble as possible.

AMERICAN WHEAT AND BRITISH BOARD OF TRADE.

Several months ago I heard a wheat story which, while not new, has an importance in American and British trade relations. The speaker, an American, said:

I visited the city mills of a certain town in England about two and a half years ago, and the manager showed me three samples of wheat. The first, from India, was of a fair quality, though somewhat hard or flinty; the second, from the Argentine Republic, was of a very inferior grade and was trashy and dirty; the third was from the United States, and was of an unquestionably superior quality. He stated that, landed at his docks, the wheat cost him about the same per bushel, and I naturally asked him why he did not use the wheat from the United States exclusively, as it was evidently so superior and would produce more flour at the same cost. He said, "We are compelled to use the wheat from India and the Argentine because our ships carry our merchandise to these ports and must come back loaded with wheat and other productions. Our board of trade passes rules and enforces regulations which require, in effect, that the offerings must be carried here in British bottoms, for otherwise the price of good American wheat would soon go skyward." His idea was that the natural laws of trade and commerce practically compelled them in England to use an inferior wheat, and that he was bound morally, if not technically, to take the product of India and Argentina in exchange for the merchandise sent to those countries in British bottoms, since, if they were compelled to take out cargo and could not bring back cargo, the price of outward-bound goods would be greatly increased in price.

FACTORY SIGHT-SEEING.

From an American newspaper, I cut the following Associated Press dispatch:

CLEVELAND, *October 7.*

As the result of a trip through the United States made by a party of European capitalists and members of the iron trade, a large number of steel and iron mills are to be erected in Europe, in which all kinds of iron and steel goods are to be manufactured, especially structural iron and steel. The process to be used in the latter branch of manufacture is to be the Grey process, the invention of Henry Grey of Duluth, Minn.

The party visited all of the big iron mills of this country. Mr. C. H. Dorer, of this city, is the attorney for the capitalists in this country, and escorted them through the United States on the trip which has just ended. In an interview, Mr. Dorer said:

"The foreign capitalists and the Europeans interested with them have already begun the construction of a large plant at Luxemburg, to cost several million dollars. The Grey process is to be used there. Ultimately, a dozen plants are to be erected in Germany, France, Austria, and Hungary. I should think \$100,000,000 would be invested in the enterprise. The structural-iron industry is an immense thing in Europe. They use iron beams in their houses even. In Germany alone, last year, they turned out 1,200,000 tons of iron beams, against 300,000 tons in this country."

This is all very nice and very friendly, but a party of American steel and iron experts would not be permitted openly to inspect continental European or British plants. If Americans should try to get

inside European plants by any form of subterfuge, they would be denounced in the newspapers as sneaks, etc. In factories owned by an individual, the owner simply says "No," and in those controlled by a corporation it requires, in most cases, a vote of the board of directors to get admittance, and it has been by no means an uncommon thing for American machinists putting up our automatic machinery to be barred the rest of the establishment.

OPPORTUNITIES FOR AUTOMATIC-MACHINE INVENTORS.

Three little industries which we have almost entirely neglected, though we could handle them profitably if we had the time, are the making of pens, fishhooks, and needles. The declared value of the total shipments of these articles through my consulate last year was \$525,019.38, and the Germans also ship us some of these articles in the poorer grades. Pen manufacture is the only one of these lines in which I have heard of any recent American efforts.

Our inventors and manufacturers of automatic machinery might come to the assistance of these industries. By no stretch of imagination can any of the machinery used in the manufacture of these articles be considered modern, and the principles of automatic feed and stamping and continuous wire handling apply to them as to other manufactures. A process employed in one line is frequently applicable in another. With the discovery that a ribbon of paper would stand the strain nearly as well as a ribbon of cotton, the calico printing press, with lighter tensions, became the newspaper web press; the need for folded newspapers becoming apparent, the devices of paper-bag machines gave the idea for the newspaper folder, and to-day the fast five-color Sunday-supplement press is a good deal of a wall-paper press, and so on.

PEN MANUFACTURE.

The total pen shipments through this consulate for the last ten years, ending September 30, are:

Year.	Value.	Year.	Value.
1887	\$139,525.08	1894	\$114,205.67
1890	145,882.91	1895	127,599.60
1891	157,189.34	1896	126,625.60
1892	143,081.59	1897	128,420.61
1893	150,146.12	1898	140,605.31

An American, backed apparently by ample capital, came here last year to study pen making. He knew that a Birmingham firm had gone to the United States in the early sixties, taking a number of expert

pen-tool makers, and had prospered. The managers, however, had been content to let a good thing alone, and by keeping the factory doors partly closed had done a fair business without being disturbed by competition, and Americans were so busy with the building up of other industries that they overlooked the pen makers. Having been employed by them for years, he knew that their processes were practically the same to-day as they had been when they began in America.

Naturally enough, he sought Birmingham to study pen-making methods, and actually expected to buy the necessary machinery in the open market, and thought that Birmingham manufacturers would show him through the factories where their machinery was in operation, just as our automatic-machinery manufacturers show every foreigner around who comes to the United States. This open-door policy is to some minds a very serious matter, though there is the good argument that closed doors make an industry too self-contained, keep it backward so far as mechanical progress is concerned, and render it liable to sudden shock, as will be seen from this pen-making episode.

This American would-be pen maker discovered that automatic machinery was unknown in Birmingham pen factories; that there were no firms devoting themselves to making any kind of pen machinery; and that no one factory here knew just what the other factories were doing, each having its own carefully guarded secret. He also found that he could not get into a pen factory in Birmingham, despite the current belief here to the contrary. He has, however, every cherished secret with him in America to-day; not only the best points from every factory here, but information from continental firms, and his new plant should be the best in the world.

Pen making is still a stamping industry, and has not even advanced as far as needle making, in which two needles are handled at a time with points out, until almost at the last moment they are broken apart between the eyes. There is a series of stamping operations, and two pens might just as well as not be carried along butt to butt, and just before packing they could be separated. This might save one-half the operations. To-day, hand machines are fed by hand, and automatic feeds could easily be adjusted. The nibs must not be strained or sprung. Slitting the nibs is a delicate process, but it would not present insurmountable difficulties to an inventive mind. Scissor knives, triangularly shaped, like a woman's ordinary button-hole scissors, the right angles reversed so that when the cutting edges of the two triangles touch a square is formed, would do it, the points of the two triangles meeting and holding the pen without strain while it is cut.

NEEDLE AND FISHHOOK MANUFACTURES.

There is practically nothing new mechanically in making needles. Very little machinery is used, and that of the most primitive type; there is room for great improvement. The great success so far has been in painstaking assortment of sizes, rejection of defective needles, and careful packing. Many devices can be used for polishing the eyehole, so that the thread shall not be cut by any roughness.

Making fishhooks is, I believe, a mere wire-handling business. The tempering of the steel wire probably presents difficulties, and the jappanning or enameling may be done according to taste.

UNITED STATES IRON AND TOOLS IN ENGLAND.

The following is from the annual report of Consul Halstead, of Birmingham (which will appear in full in *Commercial Relations*, 1897-98):

PIG IRON.

American pig iron is coming into British ports in increasingly large quantities. It may be fairly assumed that this trade has passed beyond the tentative stage and is now established on a genuinely healthy basis. Within the past fiscal year, the transition was made, with the result that to-day, in parts of England, there is an actual demand for American pig. This state of affairs may be contrasted with that of only a few months ago, when American salesmen experienced the greatest difficulty in placing even trial orders.

The good quality of our Southern coke iron has been amply demonstrated, and to-day it is recognized as the equal of the best brands of Scotch and English iron and superior to makes of part mine and cinder pigs.

The Midland counties consume large lots of American iron, chiefly forge grades. This is natural, because the principal industry of the Black country is the manufacture of merchant bars and sheets. Probably three-fifths of the iron plants in this district are rolling mills and puddling furnaces. In this district alone, iron from the United States is now coming in at the rate of about 2,000 tons a month, roughly speaking.

In the northern counties, where textile and cotton machinery and machinery castings of all kinds are made, the foundry grades are consumed in larger proportion than forge pigs; but all grades give satisfaction, irrespective of the quality of work to be turned out.

Birmingham and the Midlands are, for geographical reasons, difficult markets for the sale of American iron. Lying inland so far

from the chief port of entry—Liverpool—the railway rates for American iron are excessively high. Shippers to the Midlands are at the mercy of a single canal company, practically operated by the railway companies and affording little or no competition. Delivered prices in the Black country are out of all proportion to the importance of the district as an iron-consuming center. Despite these obstacles of high inland freight, American forge pigs find a comparatively ready market in this locality. The matter of high inland rates, both on raw materials from the seaboard and on finished products outward bound, has engaged the attention of the ironmasters in this section, and several conferences have been had with the railway companies, but with no practical results.

Formerly, a disparity in prices between English and American irons in favor of the latter was the only reason for a sale here of American pig; but the recent rise in the American market has served to show that even when Alabama iron is higher than British native brands it can still find a market, and that its place here is permanent.

Very little of the foundry iron from our Northern States comes into England, the great bulk of the trade being in Southern—chiefly Alabama—iron; and the heavy movement of this tonnage is confined to the cotton season, when low freight rates for carriage across the Atlantic are obtained, because pig iron serves admirably as ballast to ships bulging with light-weight cotton.

Some quantities of Lake Superior charcoal iron for malleable practice, chilled rolls, cast-iron car wheels, etc., have been successfully sold in England.

REWARDS FOR THE PIONEER IN BRITISH TRADE.

Nowhere does the pioneer in a trade, who conducts his business on persistent, careful, and honest lines, get his just reward so certainly as in Great Britain. Nowhere else is fair dealing of more value; yet in no country is it harder to get a start. A man once your customer, you can reasonably calculate he will continue your customer if satisfaction is given and there are no violent changes in trade conditions; and a fraction of a cent will not lure him away or tempt him to make doubtful experiments with new material. The Americans first in England with desirable and high-grade pig iron have established a business which they can count upon as their own; and those pig-iron men who have been waiting to see results can not come over here now and capture even a portion of the hard-earned business by underbidding, for a slight cut will not do it, and the margin is too close for a big drop in price. They may offer similar grades and give chemical comparisons; but they will find that brands

known here have a good will which is invaluable, and that they must begin at the bottom of a ladder with somebody ahead of them.

The great mercantile houses here who, on the doctrine of chances, financed the American early efforts to sell a good grade pig iron, thinking that there might be a business development which they could control when they wished to do so, find now that they have little to say in the matter; that because of their early lack of attention and their careless attitude they missed seeing the crisis, and must now be content to accept their small per centum and get that only as long as the home concerns find it convenient to give it to them.

In the same way, the home firm must recognize the rights of the American salesman it sends here for pioneer work. In the representative, particularly one from a foreign house and if he is a bright American, the British manufacturer sees the house; his is the entrée, that difficult point of attainment here. The customer belongs to the salesman, who is held almost personally responsible; and it is very unfortunate to represent a house which does not fill an order with exactness.

ONE GOOD WAY TO INAUGURATE A FOREIGN BUSINESS.

In a report printed in CONSULAR REPORTS for October* I called attention to the dangerous haste with which American manufacturers granted exclusive agencies for continental Europe and Great Britain, when they were personally sought by well-accredited foreigners who represented houses of undoubted financial responsibility, frequently ready to pay 70, 80, or 90 per cent on consignments, or even, as a tempting bait, "cash f. o. b. New York." I urged that they take time for investigation and satisfy themselves that the motive behind such a proposition was not an intention to control and hamper a possible future competitor, and to buy American styles in merely \$5,000 orders, while efforts would be made to sell foreign adaptations of the articles. I stated I knew there was a great deal of such trickery practiced against Americans, and gave an instance.

Consuls warn, warn, warn, until they become very tiresome, and we see that the initial export efforts of American manufacturers are beset with so many difficulties, no matter what plans are formed or directions taken, that we despair of offering suggestions; and American export trade, because of the excellence of our manufactures, is growing so rapidly, despite every obstacle, including bad trading methods, that it will all come right in the end. There has, however, been much dearly bought experience, and the tiresome consular warnings have without doubt saved many Americans from the pitfalls of others in different lines.

* No. 217, p. 275.

Failure in export efforts is nearly always due to American impatience, to unwillingness to accept new trade conditions, and to reluctance to make special styles. Salesmen are not given time to build up a new business. The slowness of the foreigner to take up new things is not believed when the salesmen, whose whole interest is the home interest, report it, and their advice is unheeded; and the fact that it took time to build up the original home business is forgotten. In most cases, it is senseless to expect a profit the first year. Building up a foreign business is as much an investment, requiring time and money, as is the building of a new wing to a factory.

My observation is, that the great successes in foreign trade have been made through the big merchant firms, with ample capital and willingness to assume all financial responsibility; when the arrangement is a commission one; and when any effort these firms may make is supplemented by the hard work of American salesmen, whose pay comes from the home houses, while the orders they get go to the commission merchant. This looks somewhat like paying a commission to the merchant for services which are not rendered; but there is an independence and safety in this plan which can be obtained in no other way, and the introductions, absolutely necessary in business here, are almost worth the commission. Besides, the knowledge of credits, freight rates, customs duties, dock and insurance charges possessed by the merchant firm is again worth a commission, and the financing, warehousing, packing facilities, branch agency sales, local sales, and foreign indents are incidental advantages to such a connection; all prove its value.

With your own salesmen, or even with one energetic salesman, keen eyed to your interest, it makes little difference how apathetic the merchants are; some business will be done for you.

Test the first strong house which bids for an exclusive agency. Offer an exclusive contract for a term of years; but retain, in a carefully worded paragraph, the right to supplement the merchant's efforts by sending your own salesmen, who are to work in harmony with the merchant firm, yet to be subject to your orders. Make the commission less when your men are in the field, during the introductory and educational campaign period, and larger when they are recalled; but retain also the right to make the decision when that period shall end. Sell all goods through your agents, and never sneak a commission from them. Live up to the spirit as well as the letter of your contract, and you will have an excellent foreign arrangement. If the goods can be sold, your American salesmen will sell them, and the merchant firm will never refuse a commission; and if they attempt to hinder your business by neglecting to forward goods

promptly, or in any other small way, your agent is on the spot, and the merchant firm has broken the contract, and you are free from the "exclusive" arrangement.

Most of the successful businesses here in American automatic machinery and pig iron have been built on these lines. The foreign adaptation trick did not work against them, because their own man kept the home houses posted on requirements. One great American concern, which has sold over four hundred costly automatic machines in this neighborhood alone, has the best little machine shop in this city, where it can set up and display machines and make the tool parts of the American-built machines to suit the requirements of the metal stock used here; yet it still pays some commissions to the big machinery house it originally dealt with, and "all's grist that grinds in its mill."

If you have a small article which would not justify you in the expense of sending a salesman, there are good merchants here who will deal fairly with you, if the article is of the best and cheapest; and every once in a while, some energetic young man in one of these establishments sees the opening for an article and becomes sole agent for it. Some of the oldest New York importing firms are now doing a growing export business, their buying connections abroad becoming selling agents for American goods. One firm first brought iron implements here without handles, having the handles put on in the United States, and then began to sell to the manufacturer of the iron parts the American wooden handles. As he manufactured extensively, where the English firm formerly had a monthly bill to settle with him the balance was soon the other way, and it had established a return business and now sells many kinds of American wooden handles, is in search of two or three special kinds, and the Birmingham house is becoming an American goods importing concern. I know some American salesmen who started out for themselves who are now building up merchant businesses of their own, and, while possessed of very little capital, are hard working and reliable, and will, I hope, be successful. An Englishman and an American make good partners. I am frequently asked to recommend agents, and I give preference to those who recognize the rising tide of American export trade and are eager to take advantage of it. In fact, so keen are many in search for new things of American manufacture, that I can freely give trade tips on good things to bring here, in exchange for information I need, and which takes time and is difficult to get. A tip to try "hard" coffin furniture is certainly an equivalent for a list of reliable dealers in bee-keepers' supplies, with their relative standing indicated by X Y Z, for which information I may have an American demand.

SPECIAL MACHINE TOOLS.

The great cycle boom was responsible for the introduction into Great Britain and on the European continent of American automatic machinery. Before that boom, an American machinery salesman could not get a hearing, and it was considered impertinent and presumptuous to claim that we could make better machinery than the older nations could. We were not thoroughly aware of it ourselves; had we but realized it, we might have competed for foreign trade in manufactured goods ten years earlier. Ingenious and inventive ourselves, we were also adaptable and imitative, and in our extensive travels we had picked up good ideas everywhere, until we had accumulated the largest store of the world's knowledge in mechanics; and it took the opportunity for comparison offered us at the Chicago World's Fair for us to become acquainted with our own mechanical eminence and power.

The idea that there was even an Old World trade for the United States was realized by machinery manufacturers first; but it was the bicycle boom which gave them the entrée of European factories, and their tremendous sales might have been unfortunate, but for the fact that foreign workmen do not get the results from machines that American workmen do, and that our manufacturers use improvements in machinery more readily than the foreigner. There are many factories in the Birmingham consular district which have, in the last two years, put in the first new machinery they have bought in a generation, and it was only the example of the bicycle concerns which stirred them up to do it. Many bicycle firms started to fit out new factories with no antiquated appliances; American machinery was superior and American machinery was bought.

The manufacture of bicycles created a special demand for machinery for rapidly producing small parts, these parts to be accurate so as to permit interchangeability. This demand made an opening in this great bicycle-manufacturing center for various makes of American machines, of both the automatic and the hand types, and hundreds of thousands of dollars' worth were put into factories here with the most satisfactory results. The bicycle trade has passed the high-watermark period and is settling to a normal business stage; it is thus probable that there will be very little new machinery demanded in this line, and American manufacturers of screw machines are giving attention to general engineering works, where, while there are already many American machines, there is great need for and opportunity to sell many more.

It would naturally be assumed that after such an excellent period of sale, our manufacturers who have been so successful in exporting machinery would have a trade system beyond criticism; but this is

not the case, if the testimony of their most experienced representatives is to be credited. These believe that much more business could have been done, and that there is great room for reform in methods; and when I ask them what is wanted, they give, in all seriousness, advice that at first seems intended for an entirely new line of export endeavor. They claim that the heads of even the big machinery concerns consider the export business as the place for the exercise of a little personal vanity, and take it into their special care, with the result that, having other multitudinous duties, much is neglected. They think some one member of the firm should devote himself to the foreign business, in its office side, and keep in close touch with the agents abroad; that one of the expert machinists with wide experience in foreign markets should be called home and put in charge of the construction of all machines intended for export. They claim that an expert machinist who has studied prevailing conditions abroad would in certain cases see the advantage of altering details in construction, and would adapt machines and tools to get better results.

While we were talking about it, one of these representatives said:

The low grades of the stock and lubricants in general use in this district caused trouble in starting some classes of machines, which arrived here equipped with exactly the same kind of tools they were fitted with for use in our home shops. No class of machinery has been more hampered by the poor stock they were required to work than the various types of screw machines. The spring chucks used in these machines make it advisable for purchasers to get bar stock which is somewhere near true in section and comparatively straight in length. In some instances, I have had machine customers who would buy stock true and even in quality and get the very best results from the very start; but in other cases, the stock they wish to use here is such as to make it necessary to alter the style of turning tools furnished with the machines, if the proper amount and quality of work is to be produced. If I have to make alterations after a tool arrives at a shop, it causes an expensive delay and is totally unnecessary, as our builders at home should thoroughly consider the conditions under which the tool will be expected to work here, and should fit it up accordingly. Traveling representatives should be instructed to obtain all necessary details as to materials likely to be used, and when forwarding orders to the home office should give full particulars for the guidance of those fitting up the machine. It should never be taken for granted that because, with a certain arrangement of tools, the machines give satisfaction in any American shop, the same arrangement will be adapted for foreign trade.

The salesmen complain that the home concerns having practical men in foreign districts do not adopt, as readily as they should, their suggestions as to what will be likely to produce the best results. The skilled mechanics who come over here from American shops to set up these machines and instruct the operators in their use are in the very best possible situation to study conditions, and their recommendations should have weight at home.

This tone of complaint and criticism was so surprising, and seemed to me so important, that I obtained the following interview with one of the brightest and best salesmen and most expert machinists I have met here. First, he dealt with screw-machine tools as follows:

STOCK UNEVEN IN SIZE.

In American shops, where round stock is being run in a machine, the bushing box tool is a popular type. For round, true stock, this tool, having a guide bush ahead of the cutting tool, is all right; but this style should never be put into machines coming into this district, unless the builder of the machine is positive that the proper stock is going to be used in it.

This question of box tools should be carefully considered when fitting up a machine coming to this vicinity. As is well known, to insure good results from a bushing box tool of the type I mentioned before—that is, one having a bushing guide ahead of the turning tool—the material to be run must be perfectly round and dead to size, each bar of stock being exactly the same diameter as the preceding bar; and the bars must be practically straight in length. Where stock containing these qualities is to be used, these box tools will give good satisfaction, as the guide bush, being made to take the stock at a good running fit, will support it steadily while it is being operated on by the turning tool or tools, as the case may be.

But I know many instances where people putting in these machines have bought stock to run in them which is of such an uneven nature that it has made the satisfactory operation of box tools of the above type impossible. I could not do anything with them myself. It would not be considered possible to run hexagon or square material in one of these tools and obtain good results; yet much of the stock put into them to run is as near hexagon as it is round. Taking into consideration this fact, that such a large proportion of the bar material used in this vicinity is of a most uneven kind, I would advise our home shops, in fitting up machines coming here, to avoid the use of box tools which have a guide in front of a cutting tool, except in cases where it is absolutely certain that proper material is going to be run in the machine.

STOCK UNEVEN IN QUALITY.

Not only is much of the stock here uneven in size, but it is uneven in quality as well; that is, in a single bar of material there may be some section that will work nicely in the tool, while the other portions of the same bar may be very hard or, on the other hand, they are very soft—so much so as to be spongy and to tear out under the cutting tool instead of cutting properly. In cases where very heavy cuts have had to be taken by the roughing box tool, this material of a spongy nature has sometimes torn out to such a depth that the finishing tool would not remove these rough places and leave a smooth and even surface on the work.

I have found it necessary, in some jobs of the kind, to alter the back rests, or steady rests, in roughing box tool, to allow the roughing tool to take a lighter cut and leave more stock for the finishing tool to remove. By this means, the bad spots caused by the poor stock tearing have been removed, and a good surface left on the finished piece. As these alterations are often necessary, box tools having adjustable, steady rests are much to be preferred to those having solid or nonadjusting rests, as in some works here it is a difficult matter to find means of properly making alterations in a solid rest. Of course, with the adjustable kind, it is as easy to set for one depth of cut as for any other depth.

PROPER TEMPER OF CUTTING TOOLS.

Another point to be carefully looked after at home is the proper tempering of cutting tools which are to be used here. Many tools, of a degree of hardness to secure the best results on the material run in machines in America, will not "stand up" on some of the stock here, and have to be rehardened. Taps and dies, forming tools and counterbores, etc., should all be hardened with the fact in mind that their work over here will be harder than at home.

BORE CHUCKS AND FEED TUBES IN ENGLISH SIZES.

Many screw machines have been sent to this district, with chucks and feed tubes bored to the nearest sixty-fourth above the size of the finished model. This is quite right where American bright stock is to be used, as it can be obtained in sizes varying by sixty-fourths; but my experience is that it is practically impossible to find English stock in sizes by sixty-fourths, as most makers of steel vary their sizes by thirty-seconds or sixteenths. As a consequence, I have had to replace many chucks with others bored to take a size of stock obtainable here. Some chucks have even come here bored to odd decimal sizes, and this invariably means a delay and often serious trouble.

ASCERTAIN DEGREE OF ACCURACY REQUIRED.

Considerable time and expense might be saved in the fitting up of special tools, if the home shop were informed as to what degree of accuracy was required on that particular piece. As a case in point, a manufacturer in this district placed an order with an American firm for an automatic machine to be fitted up for making steel bushes. The representative who received the order, not going into the question as to what quality of work was required, sent the model across to the firm, who proceeded to fit up the job in accordance with its usual custom on that class of work. It arranged the machine to accurately turn the outside of the stock, and finish the hole in the center of piece to size, by the use of reamers, and produced work exactly to model. The machine, rigged up with expensive tools and full set of extra tools as well, arrived duly and was put in operation, producing an accurate job. A few days later, the American representative, calling there, noticed that the outside turning tools and the reamers had been removed from the machine, and it was simply performing the operation of drilling and cutting off the bushes. Upon his inquiring as to the cause of the removal of the tools especially made for producing accuracy in the work, the manager of the concern pointed to a row of English hand machines operated by girls, drilling and cutting off the same style of bush, and told him that if he should send work as produced on the automatic, dead to size, along with the work from the other machines to his customers, they would reject all the bushes made on the old machines. In other words, the machine as arranged did too good work for him, and the cost of getting out the special tools might as well have been saved had the representative been informed as to what sort of a job was wanted.

And not only would the cost of these special tools have been saved, had the question of the degree of accuracy required been investigated by the salesman, but the machine could have been fitted up much more quickly, and considerable time in the delivery to the purchaser gained. In this case, time meant money certainly, as he could dispose of all work he could turn out, and every day's delay in the delivery of the machine to him meant a considerable loss. Furthermore, the machine could have been arranged in the fitting up of the tools to have produced a very much greater output per hour, had it been understood at the home shop that the

operations of forming and reaming could have been dispensed with. This shows that the representative would certainly not have been wasting time if he had taken the trouble to inquire thoroughly into all details regarding the use to which the machine was to be put.

MORE TOOLS BROKEN WITH HAND THAN WITH AUTOMATIC MACHINES.

Builders and users of automatic apparatus who will read what you say in the CONSULAR REPORTS may be interested to know that in this department was beautifully illustrated the fact that an automatic machine, properly equipped and adjusted, will cost less for repairing and grinding of tools than will these light hand machines, with the class of operators usually put on them in this district. The number of drills and cutting-off tools dulled and broken in each of these hand machines in the course of a day was very great, while in the automatic there was very little trouble of the kind experienced. Of course, the trouble with the hand machinery was due entirely to the fact that operators with little mechanical skill or ability were put on them, and they simply crowded the tools into the work as hard as possible, and consequently the tools were bound to break. Thus a machine which controls the movements and feeds of the tools automatically has a great advantage over a machine which gives an unskilled operator a chance to crowd the cutting tools.

INSTRUCTIONS.

What about instructions sent with the machine? I asked. Will the firms here read them?

EVEN HANGERS PUT UP THE WRONG WAY.

Oh, yes; there is no doubt that books of instructions as sent out by some American firms are of the greatest service, and it is one of the means that all builders of special tools should make use of. A good treatise on a special machine, to be of the most service, should, of course, begin at A and go to Z—that is, it should be written from the standpoint that the workman who is to operate it knows nothing whatever about that class of machine, and all information possible which will assist in the satisfactory manipulation of the machine should be given, along with suitable illustrations showing any parts which are at all mysterious to the uninitiated here. The best methods of changing the machine over for new jobs—cutting speeds and feeds—and the best manner in which to make adjustments should certainly be given. Some American manufacturers may not, I know, think that any explanation regarding countershafts is necessary; but a little space in a treatise might well be given to counters. Most machine builders have a design of hanger, with the strongest part of the casting where it should be, between the countershaft and the main line. But in a very large number of shops here, these hangers are actually put up the wrong way about; and it is not funny at all, for the pull comes against the weakest part of the casting. That none of them have come down is a pretty good recommendation for American iron. The blue prints sent by some concerns, for the assistance of those putting up the counters and placing machines, do not show enough and are far from satisfactory.

REASONS FOR PLACING SCREW MACHINES AT AN ANGLE.

The system of placing screw machines at an angle with the overhead works for the sake of saving space, as we do at home, puzzles many mechanics here, and it is a common thing for them to get the machines set wrongly. American experts who spend their time instructing operators in the use of the machines, are often

delayed for a considerable time by the fact that when they go to a shop to start machines they find them located wrongly. Tool builders would save themselves some expense if they sent blue prints showing the relative position of machines and counters so clearly that there would be no chance whatever for mistake in placing them, even by the thickest headed. The boys at home may think that a workman should use his judgment and go ahead with a job correctly, even though every detail may not be explained; but many workmen are found to be entirely without judgment, and the man who locates a machine wrongly is often the same sort of workman as the one who laces a belt through the ladder he is standing on, and then cuts a rung out to get the ladder down. That this class of men is ever put onto high-class machinery is beyond comprehension, but it is a fact that many men now operating valuable tools have far too little skill and judgment for such work. The matter of detailed instructions can not be emphasized too strongly, and some of our American builders will do well to consider the matter, if they wish to have their machine used properly after their own operator has turned it over to the man who is to look after it.

BRANCH ESTABLISHMENTS.

My informant continued:

The system adopted by one of the leading American firms, of having a branch in this district where all tools are made for the English trade, is an excellent one and should be employed by other American concerns building machines for similar work. Not only is there a saving of several weeks' time in the delivery of a machine by having a place to fit it up here, but it also gives the opportunity to a possible customer to see machines in actual operation, and is the very best advertisement possible.

As screw machines are usually fitted with special tools made to fit models furnished by the customer, it is necessary, of course—where there is no branch shop here—to forward the models to the home shop in America, and the time elapsing until the machine is returned is necessarily of considerable length. One can readily see the advantage of having a branch establishment on this side, where models will be received in a very short time after leaving the works of the customer, and where they can be immediately taken in hand for the making of the tools.

Many manufacturers who are not acquainted with certain special machines are anxious to see them in actual operation before purchasing. A branch establishment here, where machines can run, gives a prospective customer the opportunity of seeing just what such machinery will do in operation.

There is a constant temptation, in writing a consular report, to drift from the recognized impersonal style to something that is personal and practical. I wish to say here, for the benefit of manufacturers of, say, some special automatic machine in the United States—manufacturers whose capital and whose lines of goods are not large enough to warrant them in establishing a branch house—that there is a young man here whose mechanical training was obtained in the United States who has a small engineering works of his own. He is regarded by American salesmen and machinists here as belonging to their class, and he would no doubt undertake to adapt American machines for the purposes of this district, to meet the

special needs, prejudices, or traditions current here. Of course, the large concerns have their own men. I believe that if I had known this man a few weeks earlier, I could have kept a brass-cutting machine from going back, through my consulate, as "returned American goods." The brass castings had so much sand in them that the machine dulled tools, so that it was too expensive. The young Englishman I refer to could have fixed it.

CAUTION NEEDED IN ESTIMATING OUTPUT.

Agents not thoroughly acquainted with European conditions should exercise caution in estimating the output of machines. They should avail themselves of all reliable sources of information, and should profit by the experience of other travelers, who may have had the opportunity of studying foreign methods and customs. All estimates on the product of special machines should be made somewhat lower than what would be the correct figure for similar work in our home shops. As the experienced friend I have been interviewing expressed it:

A customer will be far better pleased at finding he is getting a higher production than he expected than to find that, owing to conditions in his shop, he is barely getting the estimated quantity from his machinery. For this reason, a traveler new to this side of the water can not acquaint himself too soon with the quality of material in general use, or find out to what extent skilled labor is employed in the operation of tools similar to those on which he is about to estimate. In no case should an estimate be put at such a figure that the operator need stand with his watch in his hand, wondering whether the second hand of his watch or the cutting-off tool will pass the time limit first.

Local representatives (located permanently in a district) can be of the greatest assistance to firms, as through their residence in the place and former business connection with manufacturers they are in the best possible situation for securing orders for machinery. They can of course keep in touch with the trade much more closely than the representative traveling through the district at intervals.

WHEN SHIPPING, SEND LIST OF THINGS TO BE FORWARDED LATER.

Builders of machines should use the greatest care in packing for shipment that none of the parts are overlooked. In cases where machines are equipped with special tools, there should be some system whereby there would be no danger of leaving out any part. Vexatious delays have sometimes been caused by lack of some important part overlooked in the packing of the tools. My friend's advice is that in cases where certain tools are not completed in time to be shipped with the regular outfit, the list of the pieces to

be shipped later should accompany the invoice of the machine and tools shipped.

He continues:

AMERICAN LATHES TOO LIGHT FOR ENGLISH MARKET.

American makes of regular machine tools, such as lathes, milling machines, drills, etc., are used considerably in this district, and more of them can be sold.

While we are in the habit of calling the Englishman conservative in his manufacturing methods, as well as in other things, we certainly are open to the same criticism in regard to certain customs in the building of machine tools. Take, for instance, the lathe as built by many of the American tool builders. Its lines are graceful, it is considered strong enough for any work it will take in, and the various hand wheels, knobs, and levers to be manipulated by the operator are conveniently arranged. Most of the builders, however, who have studied English likes and dislikes in machine tools know that a great many engineers on this side believe the American lathe to be altogether too light in certain of its details, and, although this criticism has been made for years, all the lathes that come into this country from America that I have seen are on exactly the same lines as those for home service.

A few pounds more iron put into lathes would not bankrupt the builder, and it would, in many cases, give greater satisfaction to the English customer, and might secure for that particular tool a readier sale. English engineers complain of the lightness of lathe carriages as supplied by most American builders, and say that the change gears for screw cutting and reversing gears in headstocks are of too fine a pitch. It is probable that there are not many cases of breakdown in American lathes, but, where a man is afraid of certain points in a tool, he may perhaps be careful about buying very many of them. I believe that the American maker who designs certain features of his lathes specially for the English market will have success, as, owing to the accuracy and general handiness of American lathes, they are well liked, aside from the points mentioned above.

In one of the best equipped plants which I have seen in this district, which uses both American and English tools, the foreman, in calling my attention to two lathes side by side, one made here and one made in America, said that the American lathe was far superior, in most respects, to the English tool. But, like so many English mechanics, he was afraid of the carriage breakdown. I made him confess that he had never had a lathe carriage break down, but he could not get over the feeling that it would happen some time. Although we American mechanics can not readily understand this feeling, as we delight in lightness of design, still it is a common feeling here, and one which should be taken into account by our tool builders who desire this market.

COMPOUND RESTS WANTED.

All lathes coming here should be fitted with compound rests. While a great many of our makers send their lathes fitted this way, others do not; yet the compound rest is generally wanted by all purchasers here, and the British workman has become so used to lathes fitted with this style of rest that he is very strongly prejudiced against the lathe which is not supplied with it.

AN AMERICAN GAP LATHE WOULD BE A SUCCESS.

It is well known that the gap lathe is a popular tool among manufacturers who have not a large enough business to warrant them having both large and small lathes. Just the proportion of gap lathes in use here I don't know, but a large

percentage is of this type. It would seem that if some American maker would put a gap lathe in the market here, he would be able to do something with it, provided the price were not too high. If there is such a tool by an American builder in the market now, it can not have been widely advertised here, as I do not know it.

AMERICAN METAL STOCK AND LUBRICATING OILS.

Some manufacturers here believe that it pays to buy American stock for American automatic machines, and a certain amount is being sold in consequence. It is thought it will become an important item. Salesmen with American fine lubricating oils follow automatic machinery and make good sales.

GERMAN MACHINE COMPETITION.

An American machinery salesman, who has both continental and English experience, tells me that one firm of German merchants in Germany, who trade as American merchants and sell great quantities of our automatic machinery, has draftsmen who copy the designs and clever arrangements of every American machine which passes through the house. They have no use for these designs at present, but they are collecting at small cost valuable data, and may soon branch out as manufacturers; or they can sell them at a high figure to some manufacturer.

Many German Americans are doing effective work in Germany, and many native-born Americans are employed as foremen in German factories; but I should add, for the benefit of those who may think of attempting the same thing, that it will not be a happy life, and that contracts do not count when the manufacturer has no further use for a squeezed-out sponge. An American salesman who has sold automatic machinery to German manufacturing concerns (and these American machinery salesmen are also, almost invariably, expert machinists) frequently finds that these machines never work in a German factory in a sufficiently satisfactory manner for payment to be made until he has given about three months of his expert attention. He then realizes that incidentally he has given valuable points for the whole establishment, on which the German purchaser has been calculating. But while American automatic machinery made in Germany, largely under supervision of American foremen, has been extensively sold, because of low price, in the Birmingham consular district, it has not proved satisfactory, and American machinery is preferred.

AMERICAN STEEL AND IRON GOODS IN GERMANY.

Referring to my report on "American and German machinery,"* I submit herewith statistical data in regard to the progress which the exportation to this country of American iron and steel goods has made in recent years.

Up to the year 1893, the United States was obliged to obtain a large part of these supplies from other countries, and the imports for that year still exceeded the exports by about \$5,000,000. In 1894, there was an excess of the exports over the imports amounting to \$8,300,000, and this balance has increased from year to year until, for the fiscal year ended June 30, 1898, it reached the sum of \$58,000,000 in round numbers.

Exports to Germany have, during this time, assumed considerable proportions. In 1895, Germany's imports of iron and steel ware (including machinery) from the United States amounted to barely \$1,200,000; in 1897, the value of these imports had already risen to nearly \$4,000,000. Three years ago, no German would have dreamed of American pig iron ever being imported into Germany; to-day American competition is keen in this country, not only in manufactured iron goods, but in pig iron and half-finished goods.

The following official figures, taken from the latest publication of the German Foreign Office, showing the imports in 1897 and during the first eight months of the current year, are very instructive in this respect:

Articles.	1897.	January to August, 1898.
	<i>Tons.</i>	<i>Tons.</i>
Pig iron.....	18,034	14,249
Tubes (forged, rolled).....	491	1,143
Miscellaneous iron goods.....	2,089	2,215
Cycles and cycle parts.....	224	417
Machinery.....	11,652	16,190

German imports of foreign-made machinery have, during the short period from 1895 to 1897, increased by nearly 50 per cent; they amounted last year to about \$12,000,000. The current year shows another increase in the imports, amounting to about 15 per cent more than last year's figures. This was chiefly due to increased orders from the United States. The Germans have, it is true, been accustomed to look upon the exceptionally large import of foreign ma-

* See CONSULAR REPORTS No. 216 (September, 1898), p. 55.

chines in Germany as a necessary consequence of the English skill in mechanical invention, especially in the manufacture of machinery for the textile industry; and, as a matter of fact, England has hitherto had the lion's share of the imports of machinery to Germany. Lately, however, the United States has increased its exports of machinery to Germany to such an extent that, should this advance continue for some time longer (as it doubtless will), America and not England will hold first place among the states exporting machinery to Germany.

Imports of machines into Germany since 1895 have been as follows:

Country.	1895.	1897.	First 8 months—	
			1897.	1898.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
England	30,225	39,862	29,719	28,287
United States.....	4,844	11,652	9,240	16,190
Other countries.....	12,138	19,134	12,444	13,648
Total	47,207	70,648	51,403	58,125

The present year shows even a falling off in the case of England, while the imports of American machines show an increase of 75 per cent over last year's figures. In 1895, the imports from the United States did not amount to so much as the sixth part of the English imports, while to-day they are equal to 60 per cent of the latter.

LOUIS STERN,
Commercial Agent.

BAMBERG, *November 12, 1898.*

GERMAN INDUSTRIES AND AMERICAN COMPETITION.

A large manufacturer in Rhenish Westphalia informs a leading rolling-mill journal of Germany that the "longed-for measures for common defense of the German steel and iron industries against American competition are still in a state of preparation and confidential consideration between big manufacturers in different departments of production in the Empire." In plain language, this means that German iron manufacturers are very much alarmed at America's capacity to compete with them in the German market.

The plans are being made very quietly, because many of the Empire's biggest manufacturers look upon an open movement as a menace to their stock, for in such a measure the public would certainly see symptoms of uncertainty, calculated to cut down dividends and

weaken trade. Explanation of the slowness with which many manufacturers have moved in this matter is also found in the fact that many concerns have been converted, in recent years, into joint-stock companies; and although these have seen the growing danger of American competition, they know that any opposition, to be effective, would cost money, and would therefore have a very great influence on their annual returns.

The union to oppose Americans is making great progress. It has been urged, particularly, that certain steel and iron industries have been affected and are in danger of further losses from American competition. Iron-pipe makers have had to reduce price rates. The German bicycle business, booming before the American invasion, when forced into competition with United States houses, has hardly been able to keep on its feet. Quite a large number of first-class concerns have had to curtail production. Many have lost markets at home and abroad. I may mention that every effort is being made to get the Government to put a \$12 (50 marks) duty on each American wheel imported into the Empire. Up to date, the delay is due to intelligent opposition put forth by retailers and dealers. Our agricultural and tool-making machines will also have hard work to hold this market for any long period of time. The German people, besides being expert originators, are most clever imitators. In fact, they are said to excel all others in their capacity to copy. My own experience and investigations prove this.

If there is one word more than another of importance for our manufacturers it is the word which urges them to meet German manufacturers in South America, Russia, Australia, Africa, and the East. Millions of dollars' worth of our tools will be taken just as soon as offered in these markets. If we can send steel to Germany, England, and Scotland, surely we should undersell all Europe in far-off countries which need the tools and implements of mining and husbandry.

This city retails articles at prices 50 per cent higher than those in our country. I saw shoes bought yesterday for \$4 per pair which Americans can beat at \$2.50. Wood-working machines, if ever placed properly on this market, must make their way. The city is very much interested at this moment in an automatic loom on exhibition here. It is an American invention. The exhibition hall has been packed every day since the loom was set up. Anyone with a good thing to sell should take out German patent rights.

J. C. MONAGHAN,
Consul.

CHEMNITZ, *November 1, 1898.*

GERMAN EXPORTS TO THE UNITED STATES.

The following statement, showing the value of the exports declared for the United States at the several consular offices in Germany for the quarters ended September 30, 1897 and 1898, has been compiled from returns supplied by the consuls-general at Berlin and Frankfort:

Consular office.	Quarter ended September 30—		Increase.	Decrease.
	1897.	1898.		
<i>Berlin consulate-general.</i>				
Annaberg.....	\$340,032	\$329,857		\$10,174
Berlin.....	1,228,603	1,461,800	\$233,196	
Bremen.....	629,759	517,088		112,671
Breslau.....	355,024	298,664		56,360
Brunswick.....	279,752	261,726		18,026
Chemnitz.....	519,531	1,192,922	673,391	
Glauchau.....	205,037	391,080	186,043	
Guben.....	50,854	115,967	65,113	
Hamburg.....	900,982	2,551,615	1,650,633	
Hanover.....	156,016	224,262	68,246	
Leipzig.....	908,514	1,219,417	310,903	
Magdeburg.....	865,375	1,800,908	935,533	
Plauen.....	495,427	379,926		115,501
Stettin.....	275,654	212,744		62,910
Zittau.....	125,985	289,406	163,421	
Total.....	7,336,545	11,247,382	3,910,837	
<i>Frankfort consulate-general.</i>				
Frankfort.....	1,196,658	1,284,669	88,011	
Aix la Chapelle.....	184,367	287,877	103,510	
Bamberg.....	96,765	125,146	28,381	
Barmen.....	1,103,517	1,280,281	176,764	
Coburg.....	847,463	1,114,345	266,882	
Cologne.....	489,574	459,471		30,303
Crefeld.....	501,747	637,329	135,582	
Düsseldorf.....	217,141	202,748		14,393
Freiburg.....	128,351	160,622	32,271	
Fürth.....	354,325	463,265	108,940	
Kehl.....	150,943	267,329	116,406	
Manheim.....	780,432	806,203	25,771	
Mainz.....	446,192	519,021	72,829	
Munich.....	175,104	148,269		26,835
Nuremberg.....	321,831	317,995		3,836
Stuttgart.....	145,681	208,072	62,391	
Weimar.....	202,298	259,183	56,885	
Total.....	7,342,369	8,541,625	1,199,256	
Grand total.....	14,678,914	19,789,007	5,110,093	

COMMERCIAL COMPETITION BETWEEN ENGLAND AND GERMANY.

Mr. E. L. Harris, consular agent at Eibenstock, sends, under date of November 5, 1898, the following translation from the Berliner Tageblatt:

We have repeatedly called the attention of our readers to the articles in the English press in regard to the competition which exists between the English and German banks. Now, a periodical which especially treats of such matters takes up the question of the keen competition in commerce and industry between the two countries.

Under the title of "What is the secret of Germany's commercial success," the Consular Journal treats the matter at length. The editor thinks that one of the most effective of German trade methods is the direct indorsing of commercial paper on the part of the banks, so that these themselves form a component force in commercial activity. He says:

"The German commercial bank is in fact one of the chief corner stones upon which the imposing structure of German commerce stands. The bank is very often the organizer of a syndicate of manufacturers or exporters, whose drafts it converts into cash. Especially is this the case in London. Then agencies are established and maintained the world over. A client of the bank receives, for example, a concession in China or a large order from some South American government. He then goes to a branch of the bank in the place, or instead of this to one of its agents, and is certain that his draft will be accepted, because the bank is a sharer in the undertaking. The growth and activity of German competition are very much accelerated through the facilities which Lombard street gives to German commercial paper. We are thoroughly convinced, and say it without fear of contradiction from any source, that if Lombard street should, for example, on the 1st of November refuse to cash German commercial paper—that is, the kind of commercial paper under consideration—Germany's exports for that month would show such a decrease that the commercial world would be astonished. We know full well, however, that such a refusal on the part of Lombard street will not take place; we know, too, that it is an utter impossibility for the London Bourse to make such a refusal; and, last of all, we know that Lombard street does a flourishing business in this commercial paper. We mention these facts for the information of those concerned, in the hope that one of the secrets of German success may be of lasting benefit to us."

UNITED STATES GOODS IN FRANCE.

The following are extracts from annual reports of consular officers in France, which will appear in full in Commercial Relations, 1897-98:

Consul Covert, of Lyons, says that American goods are popular. Merchants say they are packed better than those received from other countries. Care should be taken, however, to mark the country of

origin on goods shipped to France, as otherwise they are likely to be held at the frontier. Goods coming through another country are subject to a warehouse tax. Direct shipments from America to France would cause a substantial increase in the volume of exports and would avoid many difficulties.

Fruit is transported from the Australias to London in six weeks, but it takes seven weeks to carry pork from Cleveland, Ohio, to Lyons. The first voyage is about four times as long as the second. The fruit is carried in cool chambers and sold at Covent Garden. California oranges, peaches, apples, plums, and perhaps melons would find hosts of buyers here. They ought to reach Lyons in twelve or fifteen days, and would be in good condition if stored in cool chambers with a temperature not more than 2° or 3° above freezing. Silk buyers arrive in Lyons from New York in eight days. If fruits and meats could be transported in that time, there would soon be a steady demand for them. The same applies to Spain and Italy.

SHOOKS.

Shooks for silk boxes and stave wood for wine and liquor barrels would find a good market in Lyons. A number of establishments are engaged all the year round manufacturing boxes for packing silks and other textiles. Manufacturers inform me that they would buy sawed and planed boards from America. They must be about three-fourths of an inch thick; length and breadth are immaterial. It is not worth while to attempt to send boards cut ready to be made into boxes. The merchants who buy the boxes first arrange their goods in piles as they intend to ship them. The packer is then sent for, and he measures the piles and makes his boxes to fit them. The boards are bought in the department of the Jura and in Switzerland. Merchants never make a contract for boards until after the forestry commission has fixed the price for timber. Americans could undoubtedly sell much below these prices, after they had learned the rates for the year as established by the commission.

SPECTACLES, ETC.

An optician who passed some years in the United States says that the American mounting for spectacles and eyeglasses is the best in the world, and that he possessed a quasi monopoly in certain lines of goods, because he bought the Franklin glass with its frame in the United States. He volunteered the information that French dealers are generally ignorant of the merit of the American mounting.

At the recent agricultural fair held in Lyons, the American visitor

felt quite at home. Excepting the wine presses—capacity from a half bushel of grapes to tons, prices ranging from \$8 up to \$1,000—almost every implement bore an American name. The churns, cultivators, hayrakes, mowers and reapers, cornshellers, sulky rakes, steel tedders, plows, thrashers, binders, and other implements nearly all were of American pattern. They were generally manufactured in France and were noticeably less neat and artistic than the American make. I heard farmers congratulate themselves on possessing some implement actually manufactured in the United States, purchased through an English house.

People over here prefer articles made in the United States to those of other countries. American inventive skill is well known and is expected to maintain its reputation by keeping some new and useful contrivance always before the world. Our manufactures are known to be so superior in finish, in smooth and easy working, that Europeans willingly accord them the palm of superiority.

Consul Tourgée, of Bordeaux, writes:

The decided increase in the importation of dried apples and pears should call the attention of the shippers of these commodities to the necessity of keeping this market well supplied with information in regard to the trade. This consulate was overrun during last autumn and early winter with applications for the addresses of shippers of dried fruits in the United States. I found it very difficult from the resources at my command to answer these inquiries. In a general way, this difficulty exists in regard to all lines of trade. At one time, when a change in the French law left an opportunity during a brief interval to import flour on peculiarly advantageous terms, I had perhaps a hundred applications for the addresses of parties who might be relied upon to ship flour promptly in order to take advantage of this opportunity. There was not in this consulate the address of a single commission merchant or exporter of flour in the United States. I might just as well have undertaken to reply to inquiries regarding any particular traffic in the planet Jupiter. It is so with almost all other branches of trade. Except lawyers, it is impossible to refer a foreign inquirer to a man pursuing any line of business in the different cities of the United States. There are at least a half dozen legal directories furnished this consulate; why not directories of other lines of business as well? Indeed, I would suggest to the exporting associations of the United States that instead of making the consuls answer an impossible mass of absurd detail questions in regard to the traffic of his district, they would be accomplishing

much more for the export trade of the United States if they furnished the consuls of Europe with a ready method of answering inquiries in regard to American exporters.

LUMBER.

The increase in the importation of lumber has been very marked and indicates, no doubt, a continuing healthful trade. I can not refrain from commending the good sense—one may even call it the exceptional sagacity—of those lumber dealers who, instead of relying upon more or less correct responses to categorical inquiries, have sent here agents thoroughly familiar with the business and capacity of their mills and also familiar with the French language, to study the trade, find exactly what is required, and enable their mills to produce precisely what is needed to supply the demand, taking care especially to use the metric standard employed by the consumer. This increase in the lumber importation I regard as almost wholly due to such common-sense study of the market it is desired to supply. A new epoch has opened in the world's commerce—the seller must seek the buyer, must minister to his wants, and produce what he desires. This is the inflexible law of the future of international trade. No producer except of the absolute essentials of life will hereafter find a market for his wares if he waits for the buyer to come and solicit his favor. If the American people expect to secure the markets of the world, they must send men equipped in each particular branch of production to study the conditions of consumption in every country. The commercial traveler is the most important element in the extension of our foreign trade; but to be effective, he must be a man who knows the language of the country to which he is sent, who is thoroughly familiar with the economics of the manufacture of the product he represents, and he must remain long enough to comprehend the business conditions of the people whose trade he desires to secure before his opinions can be safely accepted as correct.

Most of the trade in hard-wood lumber products is done by English houses. Of course, the product originally comes from American mills. Wagons, spokes, and handles, and all turned goods in this district are, I think, imported from England, though the wood itself is mostly of American origin. Whether it would pay to seek to get this trade direct, is a question which can only be determined by months of careful study on the part of one thoroughly familiar with every branch of the business. Though I have been a manufacturer in this line and have consequently a particular inclination to the study of conditions affecting this trade, I should hesitate to advise

any manufacturer to enter this field without some months of careful study of actual conditions—not of the market merely, but of the ultimate consumption. Judging from what I have learned, I should doubt the policy of competing with the English trade, which is carried on by customers of American producers.

AGRICULTURAL MACHINES AND IMPLEMENTS.

The increase in the importation of these articles is a strong testimony to the superiority of American work. At the same time, I am of the opinion that the study of the agricultural conditions of this region would greatly increase the demand for certain styles of agricultural implements. For instance, I find that the plow used for cultivating the vineyards, even of the richest proprietors, is drawn by a yoke of oxen attached to a wooden beam 6 or 8 inches in diameter and 8 or 10 feet long, to the rear end of which is attached the plow. Why do they not use an American plow with one horse or one mule, instead of a yoke of oxen and this long, ungainly wooden beam? It is not because they do not know of improved mechanisms. The men who own the rich vineyards of the Medoc are not ignorant. Most of them have visited the United States. They know how we do things on our American farms. They are able to purchase such implements as they desire for the cultivation of their vineyards. They know the soil, the crops, the laborers, with which they have to deal. They are the best detail economists of the civilized world. The saving of a cent a barrel in the cost of production of wine is an important matter to them, worthy of the most serious consideration. If they use the ox team and heavy wooden beam, it is because they believe they get the best results thereby. If American manufacturers wish to sell them agricultural implements, they must provide something equivalent to what they now use, or which has clearly demonstrable economic advantages. What is the best in Kansas or Ohio may not necessarily commend itself to the judgment of the intelligent agriculturist in southwest France, and it is impossible to make a man buy what he is not convinced it is to his interest to use.

The French consumer is slow to change his mind or his method. The French merchant makes no effort to sell new things, but only to supply what his customer asks for. This is true of all sorts of goods. American tools and implements are so different from those to which the French laborer has been accustomed that the demonstration of equivalency or superiority is the first step toward securing a market. On this account, the mere sending of advertisements and circulars, especially when printed in English or German (as is usually the case with American advertisements sent here), is simply

a waste of money. It will never secure or increase trade. The good sense which has been displayed by American manufacturers in improving the form and finish of their goods must now be applied to bringing them to the attention of people not anxious to learn or change, if they expect to secure European markets. An intelligent study of the conditions of consumption is just as important as the mastery of the economics of production. These conditions can not be guessed at or learned in any way but by the actual observation of one skilled in the details of each particular line of production.

Consul Prickett, of Rheims, also refers to the conservatism of the French, but thinks that, with the proper mode of procedure, American products could be sold. He continues:

Bicycles have a good start. Four years ago, I am told, there were not one hundred in the whole city of Rheims. Now they are coming in more general use, and workmen are commencing to use them. There are a number of machines of American make. These have been introduced generally by houses having headquarters in Paris. Many more can be sold in the future.

The roads are fine and all vehicles of pleasure seem to me too heavy. I have not yet seen a buggy. All conveyances intended for two persons, without an extra driver, consist of cumbersome carts, ugly and uncomfortable.

The furniture made in France is well made but high priced. Wood is scarce and dear.

All the plows and harrows that I have seen are of French manufacture, and they do not compare favorably at all with plows like the "South Bend" or "Oliver," or with harrows like the "Acme."

The lamps in use here give very poor light. There are no lamps for sale in this city that are furnished with a burner similar to the Rochester. Perhaps the Rochester would burn too much oil to please the French, who are very economical.

If manufacturers, or firms interested largely in the lines of goods I have indicated, would pool their issues and establish agencies at some port of entry or central point in France, and work the territory—as they do in the United States—with experienced and capable men, gratifying results would be accomplished.

FRENCH TARIFF ON COTTON-SEED OIL.

Consul Brittain, of Nantes, writes, under date of November 18:

I have just received information in regard to an anticipated change in the French tariff on cotton-seed oil. Nearly all of this oil imported into France comes from the United States, hence the consummation of the proposed plan would be a severe blow to the American exporters. I am informed that an influential company has been formed in France, and that strenuous efforts will be put forth by its members for the purpose of securing the passage of a measure which will place the import duty on cotton-seed oil at so high a figure that it will be practically prohibitive. I am informed that, after accomplishing this, the company will interest themselves in the manufacture of cotton-seed oil in France, importing the cotton seed for that purpose. They will then be in a position to dictate the price of the oil in this country, which will no doubt be advanced, thus necessitating an increase in the price of all commodities into which cotton-seed oil enters. The interested parties, I am told, have submitted a measure to the French customs commission, and are urging the commission to recommend its adoption. The measure would practically prohibit the importation of the oil into France.

During the first nine months of 1898, imports in this line amounted to 55,544 tons, valued at \$4,091,534. Nearly all of this product came from the United States.

The same company has also recommended a decrease in the duty on cotton seed. This would result as disastrously to the American exporter as the former measure proposed, because the greater part of cotton seed now imported into France comes from Egypt.

The present duty on cotton-seed oil is 6 francs (\$1.16) per 100 kilograms (220.46 pounds) gross, or about 7 francs (\$1.35) net. The commission will probably recommend the adoption of a measure similar to the one indicated, and it is likely to become law, unless there is a protest entered by the Government of the United States. In case the law is enacted, it has been suggested that our Government place a correspondingly high duty on sardines, which the United States imports almost exclusively from France.

BELGIAN IMPORTS FROM THE UNITED STATES.

In his annual report (to appear in full in *Commercial Relations*, 1897-98), Consul-General Lincoln, of Antwerp, says:

In connection with a consideration of the subject of Belgian imports from the United States, the figures given in regard to the following articles will be found of interest to our exporters:

The quantity of starch and nonedible farinaceous substances exported from our country into Belgium during the first six months of 1898 was 5,206,253 pounds, as against 2,608,462 pounds in the first six months of 1897 and 169,973 pounds in the first six months of 1896.

The importations of certain kinds of timber from the United States increased in a notable manner during the first six months of 1898. Thus the imports of oak and walnut boards for the first six months of 1898 were 1,830 cubic feet, as against 961 feet in 1897. The increase in the import of sawed oak and walnut for the same period of time was also notable, the figures in 1898 being 104,546 cubic feet, as against 66,190 cubic feet in 1897.

Belgian wheat imports for the first six months of 1898 from the United States were 292,582,000 pounds, as against 143,584,570 pounds for the corresponding period in 1897. The amount of the import of rye for the first six months of 1898 was 86,198,510 pounds, as against 25,368,797 pounds for the first six months of 1897 and 16,868,496 pounds for 1896—a very notable increase. The import of indian corn for the same period of 1898 was 317,655,600 pounds, against 207,004,143 pounds in 1897.

The import of wheat flour for the first six months of 1898 was 2,555,018 pounds, against 882,803 pounds for the corresponding period of 1897.

The import figures for malt were 1,024,711 pounds during the first six months of 1898, against 495,007 pounds in 1897—a notable increase.

The import of vegetable oils was 11,992,413 pounds, against 8,431,256 pounds for the first six month of 1897.

One of the most notable increases in imports from the United States is lard, the importation of which for the first six months of 1898 amounted to 18,543,477 pounds, against 7,568,431 pounds in the corresponding half year of 1897. The increase in the importation of other animal substances, such as fish and fat other than lard, is also noteworthy, the import being twice as large in the first six

months of 1898 as in 1897, the figures being 3,379,468 pounds for 1898 and 1,551,694 pounds for 1897.

The import of raw cotton rose from 29,627,447 pounds during the first six months of 1897 to 49,405,242 pounds in 1898. The import of raw silk for 1898 also shows a considerable increase over 1897; the figures for the first six months being 38,434 pounds, against 12,189 pounds in 1897.

The import of steel in bars, sheets, or wires, not classified, was 153,049 pounds for 1898, against 6,067 pounds in 1897. The import of raw copper and nickel was 8,601,132 pounds in 1898, as against 5,248,471 pounds in 1897. The import of old iron likewise rose from 34,171 pounds in the first six months of 1897 to 468,153 pounds in the corresponding period of 1898. In wrought iron (not classified), the import for the first six months of 1898 was 38,172 pounds, against 14,124 pounds for the corresponding period of 1897. One of the most noteworthy developments in Belgian imports from the United States was in pig lead, the import of which in the first six months of 1896 amounted to 1,590,365 pounds, against 3,833 pounds for the corresponding period of 1897.

The imports of canned fish, tobacco, wood for dyeing purposes, smoked ham, tongue, and lard show notable increases; while the item of oleaginous grain substances rose from 609,461 pounds for the period under discussion in 1897 to 5,816,616 pounds in 1898.

ELECTRIC STREET RAILROADS IN ENGLAND.

Heretofore the cities of Great Britain have been among the most backward of any cities of the leading nations of the world in the matter of street railroads. A great change is taking place, however. There has recently appeared in London a trade journal devoted to street railroads and kindred subjects. Undertakings are in progress in the principal cities of the Kingdom for the establishment of the most improved systems. In a large number of cases, these enterprises are a feature of a remarkable movement which has been quietly but irresistibly getting control of the government of the chief cities, and may be described as "municipal socialism"—that is, the ownership and operation by the municipality of certain enterprises which by their very nature must necessarily be more or less monopolistic, such as street railroads, electric and gas lighting plants, the water supply, and telephones. In some instances, however, this municipal socialism extends beyond this classification. In several cities in Great Britain, the municipal corporations build dwellings for work-

ingmen and even run hotels; in others they erect and operate magnificent mineral and Turkish baths.

In this connection, the following extract from the Liverpool Daily Post of the 23d instant is of interest:

Lord Rosebery once described the work of the London county council as the greatest experiment in practical socialism that the world had seen. People who dislike socialism, especially socialism of the practical kind, will be very angry with the decision arrived at by the county council to-day to throw part of the rent—or what ought to be the rent—of some new working-class dwellings [municipal] on the rates [local taxes]. The justification for this step seems to be that suitable houses can not be erected in place of those that are about to be removed unless higher rents are charged, and that to charge higher rents would be a hardship on the displaced tenants. Consequently, the general ratepayer is to be called upon to disburse the balance between the old rent and the new.

In Liverpool, the city government buys property condemned as unsanitary, and erects thereon model dwellings for workingmen; it has established the finest system of public salt and fresh water baths, both for swimming and ordinary tub baths, of any city in Great Britain, some of them being free; and recently the city has taken possession of the electric-light plant (but not the gaslight) and the entire street-railroad system. In the neighboring town of St. Helens (the center of the English chemical trade), the municipal corporation is to lay the tracks, furnish the cars, and equip the routes with overhead trolleys and supply electric motive power, but will lease the entire system to a company, who will be allowed to charge only certain fixed fares.

A few days ago, the first electric street car in Liverpool was started. The line is experimental. It is $2\frac{1}{2}$ miles in length and has a double track. Each motor car has a trailer, the latter being a smoking car. The fare is a penny (2 cents) for the trailer and 2d. (4 cents) for the motor car. The cars are to be fitted with air brakes. In Liverpool, as in most of the other cities referred to, it is intended to use electricity as the motive power for the street cars, although there are those who insist that gas or oil motors are preferable.

Attention is here drawn to this newly awakened spirit of enterprise, so general on the part of British municipalities, in the hope that American contractors and manufacturers may secure some of the work of supplying the plants. The recommendation is made that American firms who manufacture and deal in street-railway and electrical appliances put themselves in communication with the municipal authorities over here. This can be done by addressing the city engineer. As nearly every city and town of importance in Great Britain has such work under progress or in contemplation, it is unnecessary to give a list, and those interested can hardly go astray by addressing the city engineer of any large city in England

or Scotland—and the same suggestion holds good, to a limited extent, for Irish and Welsh municipalities. The further suggestion is made that American contractors and manufacturers who desire to bid for such work should have an agent, say, in London, who could keep them informed of the undertakings determined upon, so that bids could be promptly made.

There is a general belief, both in the United States and England, that contracts for these public undertakings must be advertised for in the newspapers and must be let to the lowest bidder. I learn, however, from official sources that this is not necessarily so. It is not the case so far as Liverpool is concerned, and I understand that it is not so as regards most of the cities. These great municipal enterprises are undertaken by authority of act of Parliament. First, certain powers are granted by general acts. Then, specific authority to meet local conditions is obtained in one of two ways, viz, (1) either by special local act passed by Parliament, or (2) by provisional order of the Government Board of Trade, which body subsequently has its permissive authority or grant of power confirmed by act of Parliament, a number of such grants being "omnibussed" in one act. The general public understanding has been that in the Parliamentary acts there is a proviso necessitating advertising in the newspapers and the awarding of the contracts to the lowest bidder. On inquiry, however, I learn that these details are left to the municipal authorities. After the plans and specifications are drawn up, the rule is for the council committee, through the city engineer, to write to concerns inviting bids. On application, the engineer will supply forms, plans, and specifications.

Without entering into the domain of politics, it is to be observed that there are two opposing views in England as to the awarding of contracts by municipalities, in so far as foreign competition is concerned. One view (and it is that held by the larger taxpayers, by the gentry, and by the professional classes) is that there should be absolute free trade, not only in the importation of merchandise, but in the awarding of contracts—that corporations, municipalities, and individuals should have no restrictions or conditions whatever imposed in regard to availing themselves of the best and cheapest markets, whether home or foreign. The other view is that municipal contracts should, if practicable, be given to home concerns and home labor, and not necessarily to the lowest bidder. This latter view is that held by the workingmen, and particularly the trades unionists, who, in England, are thoroughly organized and have a potent voice in political matters, both national and municipal.

Within the last two years, there has been a widespread agitation in Great Britain against the awarding of public contracts to foreign

concerns. This sentiment has been particularly aroused by the bringing over of workmen from the United States to perform public contracts. Were it not for the fact that for the last eighteen months labor generally has been plentiful here, with fair wages, this opposition would probably have made itself even more manifest. Certain industries, particularly those relating to iron and steel, are very busy in Great Britain now, as there is an accumulation of orders which had to be postponed because of the recent engineers' strike. It so happens that the movement described above for the "municipalization" and improvement of street railroads and the construction of electric-light plants, etc., became active throughout Great Britain contemporaneously with the labor troubles of last year and the year before. The result was that the British manufacturers were placed at a great disadvantage when it came to making bids for these public contracts, and this applied both to prices and the time in which the work could be turned out. Some municipalities issued advertisements for tenders and gave the contracts to the lowest bidders, even though they were foreign concerns, and a number of American contractors and manufacturers reaped the advantage. The Germans also got a number of contracts for steel rails. Then the agitation arose among the workingmen against giving contracts to foreign concerns, and pressure was brought to bear upon the councilmen and aldermen of the various municipalities.

Nearly two years ago, the corporation of Liverpool purchased the street-railroad system for about \$3,000,000, with the intention of substituting electricity for horses, the details being left to a committee of the city council. It was decided to build an experimental line, double track, from the center of the city for a distance of about $2\frac{1}{2}$ miles. Although little was publicly said about the matter, the committee was confronted at the outset with the opposition to foreign competition; yet, several of the most active of the promoters of the improvement were pronouncedly in favor of a free field and no favor. The first success of the opponents of foreign competition was in the defeat of the proposition to employ an American supervising expert. Bids were obtained for steel rails from a number of firms in England, the United States, and Germany. It was discovered that the English bids ranged from 10s. to 30s. (\$2.43 to \$7.29) per ton more than the American and German bids. It was claimed that the American and German bids did not fill the conditions exactly as to height and shape of the rail. So the contract for the rails was awarded to a London concern. There was no stipulation as to material, but the distinct understanding was that English rails should be supplied. It turned out, however, that the English concern sublet the contract to a German firm, and all the rails

which have been laid on the experimental line, just completed, are marked "made in Germany." The excuse given by the London firm was that, owing to the accumulation of orders on hand, they could not meet the contract in time with English rails.

Last week, the committee in charge gave out to a Leeds firm a contract for the rails for an extension of the experimental line. The price to be paid is £7 (\$34) per ton. The chairman expressed satisfaction that the rails would be of English manufacture.

So far as the street cars were concerned, the municipal committee found that no English firm could turn them out in time, and so they were compelled to go abroad for the experimental cars. About fifty have been purchased so far, half of them coming from the United States and half from Germany. Nearly all of the electric plant has come from the United States.

I have inquired with particularity from those in authority whether, in the extension of the electric street-railroad system, foreign competition will be invited and accepted if the bids were the lowest and the best. I am informed that, owing to the protests of their constituents, the city council will not go abroad for any more of the work where it can possibly be done in England—and this will include the furnishing of rails, electric plant, and cars. It is better that American contractors and manufacturers should understand the situation as it really exists, and yet I believe it is worth their while to make an attempt to secure some of the work, not only in Liverpool, but in other British municipalities. Within the next few years, there will be a great many million dollars spent by the municipalities over here in street-railroad and electric-light improvements. King's Manual of Electrical Undertakings gives the aggregate capital of the electrical companies in Great Britain and Ireland for 1898 as \$426,426,120. In Liverpool alone, from \$5,000,000 to \$7,000,000 will be spent for steel rails, electrical plant, and cars within the next two or three years. The length of the contemplated street-railroad extensions is about 100 miles.

A heated discussion is going on here as to the best system of traction. The general sentiment is strongly in favor of electricity as against horses, gas, or oil as motive power. The experimental line, just completed, is the overhead-trolley system. It has met with much opposition from the standpoint both of æsthetics and of safety. The committee which had the work in charge claimed that the best experts, both in the United States and on the Continent, have pronounced the conduit system a failure, and they plead that they were therefore compelled to adopt the overhead system. The probabilities are that the overhead trolley will be used in the extensions, but that the work will be more artistic and lighter than that

of the experimental line. In this connection, it is interesting to note that the city council of Manchester has formally adopted the overhead-trolley system as opposed to the conduit system for the reason, as given, that investigations at New York, Washington, and Baltimore had demonstrated that the former system was the cheaper and more adaptable to varying physical conditions. There are, however, several systems proposed which, it is claimed, are as cheap as the trolley system and as safe as the conduit system, without the disadvantages of either. Particular commendation is given to a new surface-contact system, the invention of Prof. S. P. Thompson, of Finsbury Technical College, London, and Mr. Miles Walker, of Cambridge. This system has been tried in London and has, so it is claimed, proved successful. A correspondent of the *Liverpool Daily Post* of the 2d instant thus describes this system:

In the roadway between the rails is laid a single row of bronze studs, which are the points of contact. The studs are about $2\frac{1}{2}$ inches in diameter and are firmly screwed down into a block of concrete about a foot square. They are not at all conspicuous and rise but slightly above the general level of the roadway. The studs are "dead" until they come in contact with a piece of iron charged with the current. As soon as the skate underneath the car touches a stud, a connection with the main is established, and the moment the contact is withdrawn the stud is again "dead." Thus the skate underneath the car is the medium of communicating the current to the electric motor, which is the one usually adopted for overhead traction; and the skate must always touch one stud before it leaves the other to maintain a continuous supply of current.

The advantages claimed for this system are: The complete safety of the public, as the studs are absolutely harmless after the car has passed over them, careful provision being made in case, through some accident, the current should remain on; the studs give no trouble at crossings, as one stud will serve for two lines of tramway; they are perfectly insulated so as to resist wet, snow, frost, traffic, and time; no interruption can take place owing to the studs being covered by mud or water, and obstructions such as stone or wood are pushed aside by the skate of the tram car. In case of mishap, a few minutes suffice to unscrew the stud and replace with a new one. It will be seen that the Thompson-Walker system avoids all the disadvantages of the conduit system, as well as the unsightly effect of overhead wires, the studs being scarcely noticeable at all.

A British company has just made an offer to the London county council to place a dozen gas-propelled street cars on the South London lines, at its own expense, with the object of proving that gas cars are more efficient and more economical than electric cars. Large claims are made for the gas motor (which is a German invention, with English improvements); but a Liverpool municipal official who has investigated it informs me that it is far inferior to the overhead electric trolley system.

In London proper, owing to the narrowness of the streets, surface street railroads are, for the most part, impracticable—at any rate in the older districts of that city. There are two underground

railway systems in London—the Metropolitan and the Metropolitan District—both using steam. There is now approaching completion a third underground railway, but electricity will be the motive power, and it is gratifying to state that most of the electric plant is of American make. There were recently ordered from America fifty passenger elevators for the use of underground railways in London. The London Times of the 21st instant gives the following information as to the substitution of electricity for steam on the two old underground railway systems:

The directors of the Metropolitan and Metropolitan District railway companies have decided to undertake at their joint cost a series of experiments prior to the introduction of electric traction on the Inner Circle lines. For this purpose, it is proposed to lay down between Earl's court and High street, Kensington, an electric installation adequate for the hauling of a train which shall be fully as heavy as those now running at the busiest times of the day on the Metropolitan Railway. This section of the company's line has been chosen for two special reasons: First, because the ordinary service thereon is not so frequent as that on other sections; and, in the second place, because it contains some steep gradients—as sharp as 1 in 40—which will enable the new electrical system to be tested under the severest conditions that would be experienced in regular working.

Each company has agreed to put down the sum of £10,000 to defray the cost of the experiments, and these will be carried on, without any interruption of the present steam-locomotive traffic, for eight or ten months—a period sufficiently long to demonstrate the practicability of the principle thereafter to be introduced generally on the lines of the Metropolitan and Metropolitan District railways. The contract for the experimental work has been let, and it will be executed forthwith under the direction of Sir John Wolfe Barry, the consulting engineer to the Metropolitan Company, with whom is associated Mr. W. H. Preece, the engineer in chief and electrician to the general post-office.

In the first instance, the generating station, erected on land belonging to the Metropolitan District Railway Company, at Earl's court, will, in all respects except foundations for boilers and dynamos, be temporary in character. Two conductors are to be laid parallel between each of the lines of the permanent way between Earl's court and High street, Kensington, and these will be permanently available when the electric system is introduced generally on the two railways. The contractors have been instructed to build for the purposes of the experiments two motors, so designed as to form part of the permanent plant, and the train used will be similar to those now running over the Inner Circle. It is expected that the preparations for this important trial will be completed during the summer of next year.

Owing to the enormous volume of traffic, the above undertaking will probably be the largest enterprise of any kind in the world in which electricity is the motive power.

The extraordinary awakening in England in the use of electricity extends in a still further direction than that outlined above. There is a scheme under way for connecting Liverpool with the manufacturing towns within a radius of 17 miles, by light suburban electric street railroads, which in the daytime will carry passengers and at

night will carry freight. Electric light and power will also be supplied to the towns. There will be a huge generating station at St. Helens. The company has a capital of \$5,000,000. There are also organizations springing up for the encouragement of the use of electricity, steam, gas, and oil as motive power for freight road wagons.

JAMES BOYLE,

LIVERPOOL, *November 25, 1898.*

Consul.

DOORS IN GERMANY.

In compliance with a request from the United States Export Association,* of New York, an instruction was sent by the Department, on June 16, 1898, to the consulates-general at Berlin and Frankfort, asking for information concerning the import and manufacture of doors in Germany. The answers are given below.

BERLIN.

Vice and Acting Consul-General Day says, under date of October 8, 1898:

After a very thorough investigation, I have ascertained that there are no imports into Germany of ready-made doors, sashes, or blinds.

Doors, sashes, and blinds are manufactured in this country only to order; no factory carries any stock or set designs, as there appears to be no standard of size. Therefore, I have been unable to procure any catalogues whatever. The exports of these articles to Germany, as recorded in the United States Treasury export returns, are doubtless merely samples sent to Bremen and Hamburg firms.

FRANKFORT.

Consul-General Mason writes, on July 8, 1898:

Until within the past ten or fifteen years, it may be said that the use of ready-made doors, sashes, and various moldings in wood for building purposes was practically unknown in Germany. Every architect designed doors and windows according to his own ideas; each builder made them by hand as required; no two architects or builders used habitually doors or windows of the same size or design; in fact, a single building would often include doors of a dozen or more different sizes. Lumber was costly, labor cheap, houses were built mainly with rough brick or stone walls covered with stucco,

* Advance Sheets have been forwarded to the association.

and, from motives of economy and immunity from fire, wood was used as sparingly as possible in construction.

To a very large extent, the same conditions still prevail in this section of Germany. In a city so modern and progressive in character as Frankfort, where building is as active and constant as in any American town of equal size, there are more than a hundred competent builders, either firms or individuals, who undertake contracts to construct almost any kind of a building for residential or business purposes; and who will make by hand every door, window frame, sash, blind, or molding that may be required, and this will be done with substantially the same tools that have been used for a century past.

On the other hand, there are in this city two establishments which represent the dawn of a new era in this respect, and where machine-made doors, panelings, and frames for doors and windows, besides brackets and various beveled and chamfered moldings, used in interior finishing, are kept in stock and are being rapidly and successfully introduced.

Venetian blinds, hung upon hinges, such as are usually used in the United States, are very rare in this part of Germany, their place being filled by what are known as "Rollladen," in which the slats overlap each other and are hung on flexible webbing or canvas bands that wind up over a roller set inside the upper casing of the window, so that the blind is drawn up or lowered by a strap passing over a pulley at the end of the roller. These blinds are attractive in appearance and can not slam if left unfastened in a high wind; but they are expensive, and the strap and pulley device for hoisting is somewhat liable to get out of order.

From what has been thus indicated, it will be readily inferred that all this class of prepared building materials is far more expensive in Germany than when made by improved machinery from the cheap, abundant lumber of the United States. The fact that such materials, both of home and Swedish manufacture, are now sold and used in considerable quantities would indicate that there is a ready field for the introduction of the American product, provided it can be adapted in respect to size, form, and general character to the requirements of German builders and architects. It would no doubt greatly facilitate the development of this trade if American exporters could send an expert to confer with German dealers, architects, and builders and thereby ascertain precisely the forms, sizes, and other specifications that are best adapted to the requirements of this market.

Catalogues and price lists intended for use in this country should be in the German language and currency; dimensions in metric measurements. It is useless to offer materials measured by feet and

inches to a builder who understands practically only meters and centimeters.

It will also be necessary, in this as in all other lines of export trade, to remember that Europe is not America, and that some concession must be made to German methods of business, which usually involve longer credits than are customary in the United States; but the percentage of profit here may—and should—be proportionately higher.

American staves and pine and oak lumber for flooring and general building purposes have already found a large and steadily increasing sale in this country. The imports of sawed lumber from the United States in 1897 amounted to 152,863 metric tons, besides a large quantity of wood—chiefly oak, poplar, and walnut—imported in the form of squared logs to be sawed after arrival. American lumber of the best grades is highly esteemed here for its clean, straight grain and its freedom from knots, cracks, and other defects.

WIRE NAILS IN SCOTLAND.

American wire nails are used in Scotland, but not on the east coast. Those sold in Edinburgh are almost wholly of German make, although they are not put on the market as such by the retail dealers. Undoubtedly the dealers here, both wholesale and retail, would prefer American wire nails to any other of foreign manufacture if the price were as low. There is a difference in freight rates between nails shipped to Edinburgh from Germany and New York amounting to 84 cents per ton in favor of Hamburg. This slight advantage in the cost of transportation in favor of the German producer, amounting to about one twenty-fifth of a cent per pound in freight, is enough to turn the scale and give the trade of Edinburgh and this district to the German manufacturers of wire nails. The Hamburg and New York rates on nails to Glasgow are practically the same—about 2 cents per ton less than the New York rate to Leith—and American wire nails are largely imported by Glasgow firms.

It may be well to add that the German manufacturers profit to some extent in this market by shipping their product in the more convenient form. Long experience in the trade with Great Britain has given them a thorough knowledge of the market, and they are careful to exactly fulfill the wishes of customers. Nails are shipped in bags, instead of kegs. The bags are more easily handled, and when emptied take up much less room than kegs and are disposed of more readily. Moreover, each bag contains 112 pounds of nails,

the British hundredweight. American manufacturers export nails in kegs of 100 pounds, unless they receive special instruction to use bags containing 112 pounds. At best, there is a slender margin of profit on wire nails to the wholesale ironmongers, and the consideration of convenience in handling the nails is a matter of some importance to them.

RUFUS FLEMING,

EDINBURGH, *November 25, 1898.*

Consul.

WATER POWER IN SCOTLAND.

Consul Fleming, of Edinburgh, sends, November 18, 1898, a clipping from the Edinburgh Scotsman of that date, which is printed below, in part:

The next session of Parliament will comprise at least one bill of an unusual character, which, if it becomes law, can not fail to have an important bearing not only upon certain industries which are now languishing and being gradually driven out of the country by foreign competition, but also upon a district of Scotland so situated as to be little more than a great waste. The scheme is promoted by the Highland Water Power Syndicate, a corporation which is understood to have very strong financial backing and to be supported by men who have an intimate knowledge of this class of work.

The object of the syndicate is to utilize the waters of Loch Ericht, the east end of which is close to Dalwhinnie station, on the Highland Railway—the west end being $15\frac{1}{2}$ miles away—and to convey them, along with the waters of other lochs, to the head of Loch Leven, on the west coast, some 20 miles distant, where a fall of upwards of 1,100 feet will be obtained, which can be utilized for generating over 23,000 electrical horsepower. Loch Ericht covers about $7\frac{1}{2}$ square miles of area and contains a very large quantity of water. The line of the canal will pass through a gently undulating country, which presents very few engineering obstacles. It will pass through the celebrated Black Water country, discharging its water, after passing through a tunnel about a mile long, into Loch Eilde Mòr, where two lakes are to be formed into one by means of a dam at the lower end of the valley, making another reservoir $3\frac{1}{2}$ miles long and a quarter of a mile wide. From the outlet of this reservoir, another tunnel will be formed to convey the water to the end of the pipe line, which will carry it over a head of 1,100 feet in two falls, or, in other words, there will be two sets of power houses 550 feet apart vertically. The total length of this pipe line will be about 1,200 yards. The lower of the two power houses will be situated within half a mile of the tidal waters of Loch Leven, navigable at high tide by vessels drawing 14 feet. At the head of the loch, some $7\frac{1}{2}$ miles from Ballachulish, there is good anchorage for vessels. Another source of supply for water will be the valley of the Black Water, along which, at a higher level, the upper canal from Loch Ericht will run. Here a dam 60 feet in height will be constructed at the lower end of the upper fall, and this will throw the water back, forming a reservoir $7\frac{1}{2}$ miles long and from a quarter to half a mile wide. The aqueduct will be formed mostly in tunnel for about $3\frac{1}{2}$ miles to the head of the pipe line at a point where a fall of about 950 feet can be obtained close to the Loch Ericht pipe line. This head of water will also be broken into two falls, which

will join the Loch Ericht water in the storehouses common to both. It will give an additional 14,000 horsepower, so that the total horsepower expected to be obtained from Loch Ericht, the Black Water, and Loch Eilde Mòr—which is part of the Loch Ericht system—will be between 37,000 and 38,000 horsepower.

One of the chief features of the proposed scheme is that the power can be brought to the sea at a comparatively cheap rate, so that whatever industries may be attracted to the spot will have a cheap means of transit for the raw material and the finished products such as could not be obtained if they were dependent upon railway carriage. The industries likely to be attracted by cheap electrical power are those of the chemical and allied trades. These, at all events, are the industries on the Continent and in America which have been most eager to avail themselves of the advantages which cheap electrical power affords. At the present time, some sections of the chemical trade in this country are being ruined by foreign competition, and some British manufacturers have in contemplation the change of their works to countries where cheap electrical power, coupled with easy transport facilities, can be obtained. The possession of 37,000 or 38,000 electrical horsepower at Loch Leven will avert the extinction of an industry which can not hold its own against the electrolytic process now being so largely adopted in Germany and America as a result of cheap and abundant water power.

The engineers for the work, which it is estimated will cost over a million sterling, are Mr. George Anderson, Edinburgh; Mr. Reginald Middleton, London; and Messrs. Kincaid, Waller & Manville, London.

INCREASE OF UNITED STATES TRADE WITH HONGKONG.

The annual report of Consul-General Wildman, of Hongkong (to be published in *Commercial Relations*, 1897-98), says:

A careful survey of the economic conditions of Hongkong during the first half of the year 1898 reveals two facts: First, a general, permanent increase of trade; second, unusual activity in mercantile circles, owing to the great demands made on the local market by the large American squadron and army on this coast. While this second condition may be temporary and may carry with it corresponding depression in some lines, I predict that it will be of great permanent benefit to American exporters. Nothing that could have happened to this coast would be of so great a help in the introduction of American goods into these markets as the presence of so large a body of American consumers in our midst. Our forces of occupation have done more than conquer a country; they have made an impression on Asiatic markets that can never be effaced. When our fleet first arrived here (in February, 1898), there were a few sample cases of American tinned milk, fruits, meats, whisky, beer, etc., in the big English and German wholesale houses. The imports from America were made up almost wholly of California flour and American kerosene. To-day, every steamer and ship from America brings

cargoes of American goods. While their ultimate destination is Manila, they are handled by European firms here and come before the public in such imposing quantities that, first, curiosity is aroused and demand follows. The great difficulty in the past has been to get the great body of Chinese consumers to sample our manufactures. Even if this were possible, the goods came over in small consignments and at prices which were prohibitive to all but those who could afford to pay for luxuries. With the influx of the Americans into Manila, American firms have found it to their advantage to send out men to study the needs of this climate. Already, one house has been established in Hongkong, with a branch at Manila, which is meeting with gratifying success. I am informed that there is a shipment of 45,000 bales of upland cotton from Texas on its way, which has been purchased by a large Chinese firm and is laid down here as cheaply as the Indian cotton. The trouble with the introduction of cotton hitherto has been that American producers have tried to place on the market the lowland cotton, which is too heavy a staple, besides being too expensive. Even our upland cotton is superior to the best Indian growth. The new cotton-spinning mill, regarding which I wrote on January 15, 1898,* is nearing completion and, it is hoped, will be in operation early in the year. It will create a new market for cotton in this colony. If our upland cotton can continue to compete with the Indian and Chinese growths, the demand will be almost unlimited, as Hongkong is the feeder for three of the richest provinces of southern China, with a population of over 80,000,000 people.

A representative of a cotton-spinning works in Connecticut is expecting to receive, in a few days, a full line of samples which were made according to specifications sent from here. He told me that the managers had never understood this market before, and, now that they did, they would find no difficulty in introducing their goods. He has also solved a problem regarding which every consul in the East has been reporting for the last decade—that is, that it is impossible to obtain the same prices for the same quality of goods on the Asiatic coast that you do in America. Our merchants never seem to realize that Hongkong (the feeder of southern China) is an absolutely free port, and that goods manufactured in the United States come from a country in which a tariff prevails. If the American manufacturer wishes to compete in these markets, he must deduct from the price of his goods the extra amount he usually adds on account of this protective tariff. For instance, there might be a vast market on this coast for American gunpowder, if the manufacturer would make it a point to compete with the German

* See CONSULAR REPORTS No. 211 (April, 1898), p. 575.

article. At the request of Messrs. Lauts, Wegener & Co. (a leading German firm), I procured samples of gunpowder from the California Powder Works. After a careful examination, they wrote me as follows:

As we are importing this article in very large quantities from Germany, these samples were naturally of great interest to us; and we may say that the quality of the powder would do very well if it could be laid down here at no higher price than the German make. The prices before us, we are sorry to say, are too dear, according to our calculation. While we could buy the German powder at a price which would allow us to sell the same in this market at \$3.86 Mexican per keg of 20 pounds, we find that for the quality marked "A" we should want at least \$5.10 per keg of 20 pounds—a figure which is, of course, out of the question.

Calculation.

1,000 kegs of powder, at 20 pounds, at \$2 gold per keg.....	\$2,000.00
Free on board San Francisco, less 2 per cent.....	40.00
	1,960.00
Freight at, say, 20s. per ton on 10 tons.....	50.00
	2,010.00
Landing .....per cent...	1
Telegrams and brokerage.....do.....	1
Discount.....do.....	2
Return to dealers.....do.....	2
Interest.....do.....	3
Commission.....do.....	5
Total .....do.....	14= 281.40
At exchange (\$1 Mexican=45 cents United States), \$5.10 per keg.....	2,291.40

It would seem easy for any American powder company to figure as follows: "We have our plant, and have a market in America for all the powder we can turn out by working twelve hours a day. For this powder, we are getting the equivalent in America of \$5.10 per keg of 20 pounds. Now, we find that by increasing our force and working the same machinery we can afford to turn out twice as much gunpowder, so that we can make a profit by selling the surplus at two-thirds the cost of the first output. In this way, we should be able to compete with German gunpowder in the Asiatic market."

A policy similar to this has introduced our plows and wagons into Mexico, and our sewing machines and bicycles into Asia.

Since the arrival of the American squadron, at least three brands of American beer have firmly established themselves here, and one brand of whisky. Canned meats and fruits have also come to stay. Our bicycles are favorites; but as the opportunity of using them is restricted, the demand can never be great or worthy of serious

competition. Within the last three months, the agent of an American sewing machine obtained an order for 1,200 machines from an English firm and at the same time an order for a considerable number of bicycles, which his company makes with the same plant that they use for the sewing machines. There will be an increasing demand for cheap sewing machines among the Chinese, and energetic measures ought to be taken to control the market.

In my report on American butter and canned milk, published in CONSULAR REPORTS No. 211 (April, 1898), page 512, I pointed out how difficult it was to get the consumers of this market to sample our goods, and said:

People here pay \$1.30 Mexican (62 cents gold) a tin for English tinned asparagus, when the same firm (Lane, Crawford & Co.) sells the finest California tinned asparagus for 55 cents (26 cents gold), better goods in every way and one-third as cheap.

Since the publication of my report, this firm writes me as follows:

American asparagus is selling steadily. * * * As to quality, we should put the American tinned article on a par with the English and French, although it is, of course, cheaper than either. * * * You are right in saying that Danish butter is the most popular here; it is the best commercially—that is, regarding both quality and price—and we have tried all sources of supply, including America and Australia.

The trade with the Chinese is a peculiar one, requiring much patience, tact, and perseverance. Generally speaking, the class of goods most in demand is of a cheap, flashy nature, commonly known as Birmingham wares, and those of a kindred class, "made in Germany," in imitation. The Germans are the sole importers of the latter, and their small commissions and methods of doing business enable them to compete keenly with the former. The method of carrying on business is peculiar to the East. Credit of from three to four months is usually given, but it is worthy of note that its observance is oftenest respected in the breach. In consequence of keen competition, the agreed term is often disregarded, the Chinaman taking delivery and paying for his goods in installments to suit his convenience. In spite of this, fresh sales are successively made with him on same terms, until this style of trading has now become generally established. A trade-mark, or "chop," after it has secured popularity, is of far more importance than the quality of the article itself. A marketable article bearing anything but a favored chop will often prove unsalable, almost at any price, and the Chinese not unfrequently use this as a pretext for depressing the market and refusing to take delivery of orders, when the slightest shade or shadow of a difference, either in size, color, or design of a chop can

be detected. All running accounts between natives are supposed to be settled by Chinese New Year, and any failures in this respect affect the credit of the defaulter. The Chinese are most energetic collectors of all sums due them by Europeans before the above date, while outstanding contracts on their part, or deliveries not taken, are indifferently allowed to stand over, with promises for early settlement. German houses grant these facilities, and others are obliged to accept the terms of the Chinese in order to retain their patronage and perhaps secure a share of new business during the incoming year. A Chinaman is most stolid and indifferent, and reveals little or no facial emotion over either a profit or a loss. He seldom admits a profit from anything purchased of a seller; and in cases where his prospective profit was to have been 40 per cent, and he only realized half of it, he will lament and, if pressed, declare that he had actually sustained a loss of 20 per cent.

In the sale of tinned milk to Chinese (whether it be a purchase made locally or the acceptance of his order), his coolies are allowed to open every case, remove the wrappers, carefully inspect each tin, reject all those bearing the slightest defacement, spot, or blemish to label, and replenish the short cases with acceptable tins. The rejected ones they decline to take, except at greatly reduced prices, and often refuse to take them at all, but buy them later in the auction room at their own prices, where the dealers combine and determine the selling price. I do not know of such combinations existing anywhere else. This system of picking over and selecting the fittest is generally allowed, and the sale of watches, clocks, umbrellas, shoes, and, in fact, of almost everything is not exempt from this pernicious system, which the merchants seem compelled to tolerate in their anxiety to do business; in fact, one rash enough to hold out for reform would have to at once put up the shutters.

The above is cited as an inseparable condition of commercial relations with Chinese, and will no doubt excite the curiosity of our trades people. We know that trades unions throughout the United States are powerful and influential, but they listen to argument. Not so in China; in no country do these unions, or guilds, as they are called, exert a more autocratic sway. Each branch of trade or occupation is represented by a guild, supported by contributions or taxes from its votaries. These guilds have no recognized head or place of meeting, their fiat being circulated unostentatiously by word of mouth; each one passing on the decree without comment or criticism, until as if by magic all of its members are found adhering unquestioningly to its dictum. As showing what close concerns they are, it may be mentioned that in cases where their influence has proved subversive of order and good government, the colonial

government, with its staff of police and detectives, has never been able to point to their chiefs or to find their body in council. As before mentioned, a refusal to comply with the customary conditions of trade would call forth their action, the result of which would be a complete taboo of the obstructionist.

It must be borne in mind, however, if one accepts their methods of doing business and grants long credits, that, generally speaking, the Chinese merchant is reliable and trustworthy, large transactions being often successfully financed with nothing stronger as a bond than his word or a book record of the facts, written and retained by the principal.

These facts about the Chinese should be borne in mind by American merchants who contemplate doing business, not only in China, but in the Philippines, as in the latter place the Chinese are not only doing important business, but are controlling factors.

There is necessarily very great interest felt in the Philippine Islands, as the large English firms doing business there have offices here; and the bulk of the transshipment cargo from all European countries, save Spain, goes through Hongkong. In the year 1897, 113 ships entered this port from the Philippine Islands (tonnage, 138,000 tons), carrying 106,431 tons. As a comparison, 151 ships entered the same year from Great Britain (tonnage, 351,178) carrying 179,087 tons of cargo and 429,609 tons in transit. The ships clearing at this port for the Philippines were 109 (tonnage, 111,487), carrying 42,065 tons of cargo and 16,691 tons of bunker coal. During the same period, 109 ships cleared for the United States (tonnage, 224,945) with 173,020 tons of export cargo. Lamke & Rogge, brokers, in their freight circular dated October 15, say:

Philippine business has been transacted, notwithstanding all the difficulties that were stated to have arisen, and a number of boats has been taken up on time-charter terms at fairly good rates.

The "difficulties" referred to are principally the heavy tariff duties, which make it impossible to sell a certain class of goods in Manila at present. As an example might be mentioned the return from Manila of 1,400 dozen bottles of aerated waters, in consequence of the duty being prohibitive. However, it is expected that these difficulties will soon adjust themselves. At date of writing, there is a demand for sailing vessels for American ports. There are eight sailing vessels in port at this moment, and cargo for New York is accumulating rapidly.

Regarding our principal imports from America—kerosene oil and flour—there is a steady demand. During the two weeks ended September 27, Shewan, Tomes & Co. report the arrival from the Pacific

coast of seven steamers, carrying 527,132 sacks of flour, at a selling price varying from \$1.40 to \$2.35 Mexican per sack.

For the half year ended September 30, 1898, the exports from this colony to the United States, as invoiced in this consulate, amounted to \$4,843,016 Mexican. In comparison, the exports to Manila between the dates August 18 and September 30, as recorded in this consulate, amounted to the magnificent total of \$1,222,968. To arrive at a true conception of the vast volume of imports that poured into Manila during the forty-two days cited, it would be necessary to multiply this by two, to cover the value of the transit cargoes that were not invoiced in this office.

In the harbor master's report for the year 1897, the total tonnage entering and clearing from this port amounted to 15,938,174 tons. There were 38,713 arrivals, of a tonnage of 7,968,606 tons. Of this number, 4,618 were steamers, 356 sailing vessels, and 28,989 junks.

The following imports of the colony are of interest to the United States:

Flour.....	tons...	85,904
Cotton yarn and cotton.....	do.....	30,581
Hemp.....	do.....	43,360
Kerosene:		
In bulk.....	do.....	47,782
In cases.....	cases...	1,689,688
Lead.....	tons...	5,496
Sugar.....	do.....	211,777
Timber.....	do.....	64,862

All of these items show an increase over the year 1896. During the year 1897, 48 American vessels entered this port with cargoes and 66 in ballast; while 102 American vessels cleared with cargoes and 10 in ballast.

It can readily be understood how difficult it is to cover the entire subject of imports and exports of this colony, when the fact that this is a free port, without a custom-house, is taken into consideration. The prosperity of the colony is rather reflected in the local newspapers and the "market letters" and "share reports" published by local firms. It is an interesting fact that, on account of its geographical position, the colony of Hongkong benefits commercially by political upheavals of any nature that occur on the entire Asiatic coast. If a rebellion breaks out in southern China, both the rebels and the Government come to Hongkong for their munitions of war, and, although the colonial government has for the past year forbidden the export of arms, thousands of Mauser rifles have found their way into the rebellious districts. The numerous rebellions in the Philippine Islands that have occurred in previous years have made big

demands upon this market for the sinews of war. Our fleet, it is estimated, left in Hongkong over \$2,000,000 gold during the war.

The price of silver has not varied greatly during the past two years, its extremes ranging between 46 and 48 cents.

To endeavor to cover the entire commercial question in Hongkong would entail a report on southern China, the Philippine Islands, Formosa, and all adjacent territory, and involve interests so vast and varied that the impossibility of complying is apparent.

AMERICAN TRADE IN CHINA.

Consul Fowler, of Chefoo, in his annual report (to appear in full in *Commercial Relations*, 1897-98), after giving details of imports at that port for 1897, says:

Dry statistical tables are not, as a rule, considered interesting reading, but one must feel a little pride to see the increase in imports of all American goods. To show that the gain is not an abnormal one, I append the following table:

Imports of merchandise especially termed American for the years 1893-1897 and the six months ending June 30, 1898.

Year.	Drills.	Jeans.	Sheet- ings.	Flour.		Ginseng.		Kerosene oil.
	<i>Pieces.</i>	<i>Pieces.</i>	<i>Pieces.</i>	<i>Hk. taels.</i>		<i>Hk. taels.</i>		<i>Gallons.</i>
1893	37,679	900	85,055	*9,476	\$9,570.76	(†)	.....	2,253,870
1894	45,025	1,220	108,647	9,638	8,186.62	(†)	.....	1,833,790
1895	59,515	2,250	154,540	25,941	20,130.22	(†)	.....	1,967,900
1896	106,326	2,500	217,560	9,502	7,696.62	(†)	.....	2,388,250
1897	142,955	4,260	336,741	9,767	7,540.14	(†)	.....	5,281,060
6 months ending June 30, 1898.....	56,037	2,720	230,180	60,429	41,393.87	124	\$84.94	1,475,775

* For June quarter; no other record for that year.

† Not mentioned.

This table not only proves that imports of American merchandise are increasing on a sound basis, but that the year 1897 shows phenomenal strides. The statistics for the first six months of this year were especially obtained from the custom-house, and covering as they do the months of January, February, and March, when traffic was at its lowest—owing to the difficulties of inland transportation, the closing of the ports north of here by ice, and the time when the political situation was very tense—they seem to show that when the books for the year 1898 are balanced, the value of American merchandise imported here will lead all others. It will possibly equal, if not exceed, the values for all Europe.

The value of American flour imported during this period was greater than for the combined years of 1894, 1895, 1896, and 1897,

if we take the only fair standard—the customs tael. The gold value for the four years (averaging the haikwan tael for that period at 79.3 cents) was \$43,470.67, against \$41,393.87 (at 68.5 cents) for the dullest six months of the year 1898. This is truly a wonderful increase. No doubt, the presence of the great military camps of Russia, Great Britain, and Germany in this vicinity have had considerable to do with this increase. Further, this is the first year that the customs reports for Chefoo make mention of American flour. American ginseng also makes its first appearance this year. This is all the more remarkable, because hitherto Chefoo has always been the entrepôt for Korean ginseng entering China.

It is also shown that in 1897, the imports of all our goods were four times as large as those for 1893 (excepting oil, which was a little more than doubled); that the imports for the first six months of this year exceeded those for the entire years of 1893 and 1894 in the case of drills, and in the case of jeans and sheetings every year excepting 1897.

Of the seventy-six classes of imports enumerated in the table of imports for 1897, forty-six show a gain over 1893—twenty-five from gold-standard countries, of which three are from Japan, four from the United States, while the only gain from England is cotton yarn. Of the thirty-two decreases, eight are from silver-standard countries and twenty-four from gold-standard countries, of which Great Britain (England and India) suffered losses in seven classes; Russia, 1; Japan, 1.

The value of the foreign imports into Chefoo in 1897 was 11,625,004 haikwan taels (\$8,602,547 gold), while the value of those goods specifically classed as American was as follows:

Articles.	Value.	
	<i>Hk. taels.</i>	
Drills	488,952	\$361,825
Jeans.....	12,152	8,992
Sheetings	1,557,170	1,152,306
Flour	9,767	7,197
Kerosene oil.....	739,287	547,072
Direct imports not included in above list.....	5,758	4,261
Total	2,813,086	2,081,684

While this is almost one-fourth of the entire value of foreign imports, it is not to be supposed that it represents all our trade; for, as repeatedly stated in previous reports, the data for all the other unenumerated American imports are not obtainable. In the customs classification of foreign imports, the great majority comes from Hongkong, Japan, and other Asiatic countries; and there are many classes of produce—opium, seaweed, etc.—in which we do not

complete. The value of Asiatic goods imported was 2,137,111 haikwan taels.

The value of known English imports in 1897 was:

Articles.	Quantity.	Value.	
		<i>Hk. taels.</i>	
Drills.....pieces..	10,245	30,735	\$22,744
Jeans.....do.	6,350	15,409	11,403
Sheetings.....do.	41,252	131,514	97,320
Yarn.....pounds..	140,533	21,615	15,995
Camlet.....pieces..	720	7,829	5,793
Direct imports from Great Britain.....		81,101	60,015
Total.....		288,203	213,270

In this table I have included every importation specified as English, just as I have included everything specified as American in the tables. A vast quantity of English merchandise is not included for the same reason that applies to American imports; but here we have imports—

Description.	Value.	
	<i>Haikwan taels.</i>	
American.....	2,813,082	\$2,081,688.90
British.....	288,203	213,270.32

In other words, the value of imports into Chefoo in 1897 specified as American was almost ten times greater than those specified as from Great Britain, and to show that this difference is real the following comparisons of the same class of goods will emphasize the point:

Quantity and value of certain classes of merchandise imported into Chefoo in 1897.

Articles.	Quantity.	Value.	
	<i>Pieces.</i>	<i>Ilk. taels.</i>	
American drills.....	143,030	488,952	\$361,824
English drills.....	10,245	30,735	22,744
Excess American drills.....	132,785	458,217	339,080
English jeans.....	6,350	15,409	11,402
American jeans.....	4,260	12,152	8,992
Excess English jeans.....	2,090	3,257	2,410
American sheetings.....	336,961	1,557,170	1,152,305
English sheetings.....	41,252	131,514	97,320
Excess American sheetings.....	295,709	1,425,656	1,054,985
Value grand total excess American.....		1,883,873	1,394,066
Less excess value of English jeans.....		3,257	2,410
Net value of the excess of American imports of drills, sheetings, and jeans over that of Great Britain in 1897.....		1,880,616	1,391,656

I would like very much to be able to present similar comparisons with European countries; but, aside from Russian oil, there is no data obtainable.

The quantity and value of kerosene oil imported in 1897 was:

Description.	Quantity.	Value.	
		<i>Gallons.</i>	<i>Hk. tsals.</i>
American.....	5,281,060	739,287	\$547,072
Russian.....	577,800	70,960	52,510
Excess American.....	4,703,260	668,327	494,562

The value of the imports into Chefoo in 1897 specified as American being \$2,081,680.90 gold, it is interesting to know that it exceeds the entire value of our exports in 1897 to any of the following countries:

Country.	Value.	Country.	Value.
Bermuda.....	\$916,050	Peru.....	\$1,074,978
British Honduras.....	578,118	Uruguay.....	976,405
Newfoundland and Labrador.....	1,100,926	Aden.....	627,463
Costa Rica.....	1,526,915	Dutch and French East Indies.....	1,577,538
Guatemala.....	2,057,085	Korea.....	68,074
Honduras.....	666,533	Russia, Asiatic.....	454,640
Nicaragua.....	1,058,592	Turkey in Asia.....	148,132
Salvador.....	1,116,424	All other Asia.....	311,893
West Indies:		All Oceania (including all Spanish islands, etc.), excluding British	
Danish.....	531,514	Australasia and Hawaiian Islands.....	451,245
Dutch.....	578,922	Azores and Madeira islands.....	420,159
French.....	1,541,995	Gibraltar.....	301,254
Santo Domingo.....	1,162,991	Greece.....	129,206
Puerto Rico.....	2,023,751	Greenland, Iceland, etc.....	225
Bolivia.....	5,820	Malta, Gozo, etc.....	39,437
Ecuador.....	808,404	Portugal.....	2,038,889
Falkland Islands.....	440	Roumania.....	43,487
Guiana:		Russia Black Sea.....	1,102,020
British.....	1,496,285	Switzerland.....	180,547
Dutch.....	442,962	Turkey in Europe.....	115,883
French.....	126,118		
Paraguay.....	1,439		

Of the eighty-six political divisions enumerated in the Review of the World's Commerce, 1896-97, pages 26-27, only twenty-nine show a greater value of our exports than this single Chinese port of Chefoo; and if the returns here could be had as accurately as those given in the Review, perhaps not more than twenty would exceed Chefoo. If we take the value of the imports especially classed American for the three northern ports of China—Tientsin, Niuchwang, and Chefoo—for 1897, as given in my report of the trade of North China* as \$8,360,561 gold, our sales in North China were exceeded only by fourteen entire divisions, and exceeded our combined sales to all the

*See CONSULAR REPORTS No. 215 (August, 1898), p. 575.

Central American States. The sales of American cotton manufactures in Chefoo alone in 1897 (2,058,274 haikwan taels, or \$1,523,022.76) exceeded those to any country or colony in the whole world, were greater in value than our sales in this line to Great Britain and Ireland and all Europe combined, and represented one-fourth of the entire sales to China. Of American kerosene oil, Chefoo bought 5,281,060 gallons, valued at 739,287 haikwan taels (\$547,072.38), or more than all the Central American States and British Honduras, all the West Indies, and one-sixth of the sales in this line to all China.

The trade for the first six months of this year is shown below:

Description.	Quantity.	Value.	
		<i>Haikwan taels.</i>	
Total value of foreign imports into Chefoo from January 1 to June 30, 1898.....		7,387,338	\$5,067,726.43
Direct imports:			
From Great Britain.....		142,154	97,775.49
From Hongkong.....		714,880	489,692.80
From United States.....		45,685	31,204.23
From Germany.....		4,928	3,368.73
From Japan.....		1,233,196	844,739.16
From Taiwan (Formosa).....		53,744	36,814.69
From Europe (excepting Germany).....		145,413	99,606.91
American sheetings.....pieces..	230,180	805,630	551,856.55
American drills.....do.....	56,037	196,069	134,307.27
American jeans.....do.....	2,720	7,112	4,873.60
Kerosene oil.....gallons..	1,475,770	209,561	142,549.29
Flour.....		60,429	41,393.87
Ginseng.....pounds..	133	124	84.94

Thus, while the total value of foreign imports for the six months ended June 30 was \$5,067,726.43 gold, the value of only five classes of American merchandise (including the direct imports for the same period) totaled \$875,087.60 gold, or \$184,643.67 more than the total value of the combined imports from Great Britain, Hongkong, and all Europe, including Germany; while the direct imports (*i. e.*, merchandise making first entry into China at Chefoo) from Germany are valued at \$3,368.73 gold, or only about a tenth of the direct imports from the United States. I have not included anything in the American totals except goods classed American, no account having been taken of the thousands of dollars' worth of provisions, canned goods, machinery, lumber, etc., which would bring the total value up to the first rank. There is not the least doubt that our trade in the north of China is of paramount importance. It is known that over six ships are under charter with Oregon lumber for work being done by the Russians near here, and already there is a five-masted American schooner discharging lumber at Kyao-chau.

The custom-house jetty is always crowded and piled high with American merchandise. One of the greatest needs of the American

merchant is an American bank in China. There is a large field for it, and I feel confident that if one of our New York banking houses established a branch in Shanghai, they would reap a handsome reward. There are, in China, French, Russian, German, and several English banks; and it is through these that all United States trade is conducted, involving a great loss to our commerce. I have hopes that ere long someone will prove enterprising enough to enter this field. There is none more profitable in the world. The Hongkong and Shanghai bank's shares sell at 215 per cent premium. There is also a most promising opening for fire-insurance companies.

It may be of interest to know that the total shipments to the Philippines from Shanghai in 1897 amounted to 12,992 haikwan taels (\$9,614), of which all but 2,301 haikwan taels (\$1,703) were from other ports; while within twenty-four hours of the receipt of orders to legalize invoices for Manila, I certified invoices covering straw braid for that city to the value of 5,257.51 Chefoo taels (\$3,653).

HINTS TO EXPORTERS TO JAPAN.

The following paragraphs are from the annual report of Consul Harris, of Nagasaki, which will appear in full in *Commercial Relations*, 1897-98:

Whenever an article of American manufacture has secured the favor of Japanese tradesmen, there is no reason for its not continuing to monopolize the market (for the sentiment of the people is strongly in our behalf), provided the standard of quality be fully maintained and an equal amount of care and attention be paid to the appearance of the packages and to the methods of shipping that are given to such matters by European manufacturers. There is a preference on the part of most foreigners and of many Japanese for glass jars for all fruits, vegetables, etc., rather than tin cans, when the former are practicable. Whatever is put upon the glass in the nature of label or advertisement should be so heavily varnished or shellacked or prepared in some other way as to permit of its being washed without marring the beauty or clearness of the label; while cans should be provided with labels other than those of thin paper, which do not allow the can to be washed and have its appearance restored when it becomes flyspecked or shopworn. The methods adopted by most of the French purveyors are recommended. In the matter of packing, it is very desirable that the initial jar or tin be as small as is practicable—for example, butter in half-pound cans, fruit and vegetables in half-pound cans or pint jars—while cases of such size as can be carried conveniently by a porter along rough mountain roads will find a much readier sale with the Japanese than

the large cases containing two dozen 2-pound cans. In the one item of biscuits (crackers), it is believed that the American bakers are gradually supplanting the European, and there is no apparent reason why our merchants should not secure a monopoly of this business, provided the standard be fully maintained. The present size of the tin boxes used rather checks the sale to the Japanese, and it is probable that tins of half the size would sell much more readily. Besides the matter of cost, there is an additional reason for the preference for small tins, in that the biscuits soon lose their crispness in this moist climate.

In textiles, machinery, implements, and all other articles, it is equally important that the standard of excellence originally established when first soliciting orders be rigidly maintained, and also that the requirements of the Japanese dealers and consumers be carefully ascertained and fully complied with. These may at times seem to be somewhat whimsical, in that they differ so widely from established custom in the United States (for example, as to the width of a piece of cloth, the length of the bolt, the number of pieces in a bale, the dimensions of a package, or the size of a case of machinery); but it will always be found that there is good reason for these requirements, either in the meagerness of the demand or the inadequate transportation facilities.

It is worthy of note that the Western Light and Power Construction Company, of San Francisco, supplied to the recently opened Nagasaki Hotel (one of the finest hostelrys in the Far East, representing an investment of some 300,000 yen) its entire outfit of electrical apparatus, including engines, in competition with several other bidders. The same company has also secured another profitable contract.

There is already a considerable importation of leather into this consular district, both sole and upper, all of which is used for making boots and shoes. Of this, the bulk comes from the United States, and there is no reason why our tanners should not have a practical monopoly of this business, and largely increase their export of raw leather to Japan. There is little reason to expect a demand for harness leather, or for boots and shoes. The duty on leather after January 1, 1899, will be 0.0558 yen (2.77 cents) per pound, specific, for sole and 10 per cent ad valorem for other kinds.

In his report for the first six months of 1898 (to appear in *Commercial Relations, 1897-98*), Consul Lyon, of Hiogo, also speaks of the import of sole leather from the United States, the value of such import during the period under review having been more than six

times greater than during the corresponding period of last year. He adds:

Our country does not meet with much competition here in this article. The only competitors classified in the customs returns for the first six months of last year were East India and France; they each shipped during the time about \$1,600 worth. The first six months of this year show France to have sent none, while East India has increased her export of that article to \$13,000.

Each year the Japanese people wear more shoes and are having more uses for leather of all kinds. The close attention of leather producers in the United States is called to this fact, and to the additional one that the supply must come from abroad, as, on account of the scarcity of cattle in this country, the Japanese people can not supply themselves.

The following table shows the importation of sole leather from the United States into this port during the years 1896-97 and for the first six months each of 1897-98:

Year.	Value.	
	Yen.	
1896	153,702	\$76,544
1897	108,768	54,166
Half year ended June 30:		
1897	19,872	9,896
1898	128,838	64,161

JAPANESE CHEMICAL TRADE.

Consul-General Gowey, of Yokohama, under date of October 20, 1898, sends to the Department of State an article on the manufacture of chemicals in Japan, appearing in the Japan Gazette of October 18, 1898, which is given below. The consul-general adds that the custom-house returns for the first six months of 1898 show imports of caustic soda to the value of about \$101,580.

MANUFACTURE OF CHEMICALS IN JAPAN.

Of the various sciences which have been introduced into Japan from Europe and America, medical science, says the Jiji, has made the most considerable progress. Yet, in spite of the fact that the science has developed so much, it is to be wondered at that very little improvement has been made in the manufacture of drugs and medicines, most of which are still imported from abroad. Medicines and drugs to the value of 2,071,115 yen (\$1,031,415) were imported in 1892, 2,791,153 yen (\$1,389,994) in 1893, 3,110,998 yen (\$1,549,277) in 1894, 4,168,847 yen (\$2,076,085) in 1895, and 3,810,714 yen (\$1,897,735) in 1896. The above figures show that the imports of drugs and medicines are yearly increasing. Indeed, it is strange that no attention is paid to this matter by the people concerned. There are some pharmaceutical institutions in Japan, but, owing to a scarcity of experts and of raw material, no satisfactory result has been arrived at. As to the manufacture of chemicals

for industrial purposes, such as sulphuric acid, caustic soda, and bleaching powder, favorable progress has been made.

Bleaching powder is made in Japan in sufficient quantities to meet domestic demands (the raw material for manufacturing which is found in the interior), though not to be exported. The manufacture of caustic soda is still in its infancy, the output filling only one-third of the demand in the interior and the rest being supplied by the imported article. Imports of caustic soda during the past six years were, according to latest trustworthy statistics, as follows:

Year.	Quantity.	Value.	
		<i>Catties.*</i>	<i>Yen.</i>
1892.....	4,797,150	173,010	\$86,159
1893.....	5,005,589	192,426	95,828
1894.....	4,622,642	205,467	102,322
1895.....	5,855,175	234,000	116,532
1896.....	2,374,118	84,263	41,963
1897.....	6,656,185	229,593	114,337

* 1 catty=1.31 pounds.

The sudden increase in the import of caustic soda in 1897 is due to the fact that the Osaka Alkali Company, who were supplying a large portion of the domestic demand, stopped the manufacture of the soda, owing to the rise in the prices of commodities and inability to compete with the imported article.

TRADE OF INDIA.

In his annual report (to be published in Commercial Relations, 1897-98), Consul-General Patterson, of Calcutta, says, in part:

The following table shows the trade of India in the last year:

IMPORTS.

Merchandise.....	\$215, 202, 372
Gold	22, 571, 788
Silver	40, 904, 698
Total.....	278, 678, 858

EXPORTS.

Foreign merchandise reexported.....	11, 628, 633
Indian merchandise.....	290, 738, 913
Gold	7, 355, 472
Silver	4, 760, 451
Total.....	314, 483, 469

The total value of the trade—imports and exports together—was higher by 0.38 per cent than in 1896-97, and only 3.28 per cent less than in 1895-96, which was a year of good trade. In this calculation, the transactions in treasure, which amounted to 14.2 per cent of the total trade, are included; but excluding them and dealing with merchandise only, the trade of last year shows a decrease of 5 per cent compared with 1896-97 and of 9 per cent compared with 1895-96.

The decline in imports of merchandise is 3.5 per cent, compared with the previous year. The serious decline in the trade of the year occurs in the exports of merchandise, the value of which was 6.1 per cent less than in 1896-97 and 14.6 per cent less than in 1895-96. The contraction in 1896-97 was clearly traceable to the failure of the crops in 1896 and the outbreak of the plague in western India, with the consequent disorganization of trade. These two calamities have also had a marked effect on last year's trade.

The total value of imports of foreign merchandise in the last three years was distributed among the principal countries with which the trade was carried on, as follows:

Country.	1895-96.		1896-97.		1897-98.	
		<i>Per cent.</i>		<i>Per cent.</i>		<i>Per cent.</i>
United Kingdom.....	\$146,100,600	68	\$156,204,253	70.1	\$144,485,801	67.1
Germany.....	7,290,505	3.4	7,154,245	3.2	7,547,008	3.5
Straits Settlements.....	6,433,182	3	5,710,578	2.5	7,470,466	3.5
Belgium.....	8,461,902	3.9	7,451,479	3.3	7,083,000	3.3
Austria-Hungary.....	4,107,100	1.9	4,612,142	2.1	6,655,058	3.1
Russia.....	5,789,429	2.7	6,259,731	2.8	6,450,343	3
China.....	8,698,159	4.2	6,662,175	3	5,242,137	2.4
Mauritius.....	5,336,150	2.5	5,602,656	2.5	5,217,520	2.4
United States.....	3,532,257	1.6	4,547,541	2	4,436,332	2.4
Ceylon.....	1,679,487	0.8	2,161,193	0.9	3,320,540	1.5
France.....	3,034,807	1.4	2,852,397	1.3	2,736,667	1.3

The principal clothing of 250,000,000 of the population of India is cotton, and the value of cotton goods imported in 1895-96 represented about 37 per cent, in 1896-97 41 per cent, and in 1897-98 38 per cent of the value of all imported merchandise. I have already, in previous reports, stated the immense demand there is here for cotton goods and the opportunity for the manufacturers of the United States to get their share of the trade by making proper efforts. The door is open, and our manufacturers have only to walk in and take possession of the market.

There is a steady increase in the demand for bicycles, and the better qualities from the United States are generally preferred.

PROPOSALS FOR TRAMWAY IN SHANGHAI.*

I send herewith an advertisement taken from the North China Daily News, calling for proposals for a tramway in Shanghai. I sincerely hope that our contractors and manufacturers will give this their best attention.

Shanghai is the great emporium for all Asia. It is to this port that the officials go to get their ideas of foreign enterprises; and if

* See CONSULAR REPORTS No. 217 (October, 1898), p. 260.

an American company can succeed in securing this contract and equipping the line with the best American appliances, it will be a valuable advertisement, and will no doubt have much influence in securing future contracts in the event of other cities in the East deciding to follow the example of Shanghai in having tramways.

To-day, there is not a tramway in all China. In CONSULAR REPORTS No. 192 (September, 1896), page 67, I gave a short account of the opposition that an American syndicate met with in trying to secure a concession to build a tramway in Shanghai. The scheme was defeated because it was American. But things have changed since then, and now I do not anticipate any opposition on the ground that the scheme would be American. If our merchants at home had their own branch houses or representatives here, they would not have such an uphill fight. Unfortunately, all their interests are in the hands of foreign firms.

JOHN FOWLER,
Consul.

CHEFOO, *September 26, 1898.*

TRAMWAY CONCESSION.

[From the North China Daily News, September 19, 1898.]

The following resolution in reference to proposed tramways in Shanghai was passed at the last annual meeting of ratepayers:

"*Resolution X.*—That the council be, and is hereby, authorized to consider the expediency of the establishment of a system of tramways in the streets of the settlement, and in its discretion to formulate a scheme for ratification by the ratepayers by which the system be carried into effect."

In accordance with the above resolution, the council hereby invites tenders for a concession for constructing and working about 23 miles of electric tramways on the "trolley system" in the streets of Shanghai.

The special attention of tenderers is drawn to the fact that the tender, if any, recommended by the council will require ratification by the ratepayers.

Plans may be seen and particulars obtained on application to Mr. Charles Mayne, engineer to the council, at the municipal engineer's offices, No. 23 Kiangse road, between the hours of 9.30 a. m. and 5 p. m., daily.

Tenderers will be required to deposit 1,000 taels (about \$718) with the undersigned, which sum will be retained by the council and deemed to be forfeited unless a bona fide tender be made by the depositor.

Scaled tenders, indorsed "Tender for tramway concession," must be sent in to the undersigned and received not later than 12 noon on Wednesday, the 15th of March, 1899.

The council reserves to itself the right to decline all or any of the tenders so sent in.

Tenders for this concession are being also called for in the press in London, Paris, Berlin, Brussels, and New York.

By order of the council.

W. E. LEVESON,
Assistant Secretary.

COUNCIL ROOM, *Shanghai, September, 1898.*

SUPPLEMENTARY RULES FOR INLAND NAVIGATION IN CHINA.*

Minister Conger transmits from Peking, under date of October 5, 1898, translation of a note from the Tsungli Yamên, and also of the "supplementary rules under inland steam navigation regulations" which accompanied it. The inclosures read:

THE TSUNG LI YAMÊN TO MR. CONGER.

PEKIN, *September 15, 1898.*

YOUR EXCELLENCY: The Prince and Ministers have the honor to inform Your Excellency that on the 27th of July last they received a telegram from the superintendent of southern trade wherein he states that "he has received the revised rules relating to steam navigation inland and has given them his repeated consideration. He further states that upon examination he finds that the three supplementary rules as regards customs dues and duties, which had been revised by the inspector-general, remain unchanged so far as the manner of collecting duties is concerned, and that steamers are allowed to take cargo boats in tow, in this way granting the same privileges to both foreigners and Chinese.

"Now, according to the new supplementary rules, the foreign merchants must pay duties according to treaty stipulations, but the Chinese merchants only must pay likin as previously. In this way, the foreign merchants gain an additional advantage and are freed from paying likin inland, thus bringing about an unfair distinction. It is also added that steamers on the Yangtze are not allowed to take cargo boats in tow without a permit. This plainly shows that the foreign merchant can request his consul for the necessary permit. By this method, the Chinese merchants would be placed at a disadvantage and forced to register their names on the foreign lists, which would give them the right to fly flags, take out permits, and do as they pleased without opposition, thus doing away entirely with the likin inland on the Yangtze.

"The superintendent of southern trade therefore requests that the previous rules be adopted and enforced."

Upon receipt of the above, the Prince and Ministers addressed the inspector-general on the subject and received from him a reply wherein he states that "the arguments made by the superintendent of southern trade were merely for the purpose of defending likin inland. Examination will show that the previous regulations were put in force as an experiment, and were subject to change, and for that reason the nine supplementary articles were decided upon and submitted to the Yamên for its approval."

The Yamên has considered the nine supplementary rules decided upon by the inspector-general and finds them satisfactory.

Instructions have been sent to the various provinces to act according to said rules.

A communication has also been sent to the superintendent of southern trade instructing him to duly observe them.

The necessary communication has been sent for Your Excellency's information.

* See CONSULAR REPORTS No. 217 (October, 1898), p. 261, and No. 219 (December, 1898), p. 563.

SUPPLEMENTARY RULES UNDER INLAND STEAM NAVIGATION REGULATIONS.

(1) Foreign goods going inland on steamers can either be taken with transit passes or by payment of dues and duties at the several stations passed en route, at the merchant's option. The vessels are not to be held in any way responsible for the terminal duties on cargo, but it must not be landed clandestinely.

(2) Native goods leaving a treaty port for the interior in a steamer must be declared at the proper custom-house and pay export duty according to the regulation for outgoing cargo shipped in native vessels. They will pay inland whatever dues and duties are payable by similar goods carried in native vessels. If the goods declared are native reexports which have originally paid export duty at another port, they may be shipped free of export duty, but as regards inland dues and duties are on the same footing as ordinary exports. The responsibility for any duties payable on goods at place of destination, no matter where the vessel comes from, attaches to the cargo and not to the vessel, but the cargo must not be landed clandestinely.

(3) Native goods once regularly shipped on board a steamer in the interior are not later required to produce proof of payment of such local duties as were leviable there before shipment, but they are liable for en route duties. On arrival at a treaty port, they will, if for local native consumption, pay to the proper office the duties paid on similar cargo carried in native vessels. Outside this duty, the steamer is not to be held responsible for any likin, duty, contribution, or charge. If the native produce is intended for export, it may be brought from the interior either under a transit certificate issued on deposit of bond, according to what are known as the Chinkiang rules, or by paying dues and duties in accordance with regulations en route, at the option of the merchant concerned, whether a Chinese or a foreigner. Goods brought from the interior merely for transmission into a sea-going or river steamer are not liable to any duty at the port except the treaty tariff export duties.

(4) All inland-going steamers are to pay tonnage dues once in four months at the treaty tariff rate at the port where registered. Towed native boats are liable to such "ch'uan liao" as the regulations provide for.

(5) Cargo shipped on native boats to be towed by steamers is to be on the same footing as regards duty payment as the steamer's cargo.

(6) Steamers are not allowed to land cargo except at places ordinarily recognized as places of trade for native vessels. In the event of their violating this rule they will be dealt with as the tariff provides for vessels frequenting places not open to trade. Similarly, vessels on the registers for inland water trade carrying goods out of Chinese territory or jurisdiction will be liable to a fine not exceeding 200 taels for the first offense; for the second, the penalty will be abrogation of the right to carry on inland trade.

(7) The customs at the treaty ports will give cargo certificates detailing all the cargo shipped there under its cognizance. These certificates will form the basis of duty payment at way stations, and the vessels concerned, unless there is reason to suspect them of smuggling, will not be detained for rigid examination at each place, but will be released on payment of proper duty.

(8) As regards the publication of the rules and regulations in force at the several places where dues and duties are payable, referred to in rule 7, it is understood that the publication is to take place before the end of this Chinese year. In the meantime, if vessels do not stop at stations, they will not be liable to any penalty for passing them, unless they are hailed to bring to by the station or one of its boats and disregard the summons.

(9) After the regulations have been made public, the provincial authorities will appoint at each treaty port a responsible officer, who will collect the dues and duties prescribed in articles 2 and 3 on goods going to or coming from inland waters and report the collections at stated intervals to his superiors. He will receive, in one

lump sum, all the dues and duties a vessel lading for a certain destination is bound to pay at the various stations she will pass on the way. The officer will give a certificate of receipt, presentation of which at the stations will exempt the goods from levy of duty or vexatious examination. The officer appointed will have an office in the vicinity of the custom-house and will work in concert with and under the guidance of the commissioner. In case any question or difficulty arises, the commissioner and the superintendent of customs will arrange it amicably. When a foreigner is concerned, he has the option of having it dealt with under the joint investigation rules.

These supplementary rules, like the rules to which they are appended, are provisional and liable to change as required.

MISSIONARIES IN CHINA.

Minister Conger sends from Peking, under date of October 12, 1898, translation of a decree by the Empress Dowager, in regard to the treatment of foreigners, especially missionaries, residing in China, as follows:*

TRANSLATION OF A DECREE OF THE EMPRESS DOWAGER WHICH APPEARED IN THE PEKIN GAZETTE OF OCTOBER 6, 1898.

From the opening of ports to foreign trade to the present time, foreigners and Chinese have been as one family, with undivided interests, and since missionaries from foreign countries are living in the interior, we have decreed, not three or four times, but many times, that the local officials must protect them; that the gentry and people of all the provinces must sympathize with our desire for mutual benevolence; that they must treat them truthfully and honestly, without dislike or suspicion, with the hope of lasting peaceful relations.

Recently, there have been disturbances in the provinces which it has been impossible to avoid. There have been several cases of riot in Szechuan, which have not been settled. The stupid and ignorant people who circulate rumors and stir up strife, proceeding from light to grave differences, are most truly to be detested. On the other hand, the officials, who have not been able at convenient seasons to properly instruct the people and prevent disturbances, can not be excused from censure.

We now especially decree again that all high provincial officials, wherever there are churches, shall distinctly instruct the local officials to most respectfully obey our several decrees, to recognize and protect the foreign missionaries as they go to and fro, and to treat them with all courtesy.

If lawsuits arise between Chinese and native Christians, they must be conducted with justice and speedily concluded. Moreover, they must command and instruct the gentry and people to fulfill their duties, that there may be no quarrels or disagreements.

Wherever there are foreigners traveling from place to place, they must surely be protected and the extreme limit of our hospitality extended.

After the issue of this decree, if there is any lack of preparation and disturbances should arise, the officials of that locality will be severely dealt with; whether they be viceroys or governors or others they shall be punished, and it will not avail to say we have not informed you.

* For a similar decree by the Emperor, see CONSULAR REPORTS No. 218 (November, 1898), p. 406.

AMERICAN WINDMILLS IN SYRIA.

A Turkish official of high rank in the Aleppo province recently informed me that he had ordered, conditionally, a number of windmills from the United States for irrigation purposes. He seems very confident that a large demand can be created for these machines, and I would suggest to manufacturers that it would be of advantage to investigate the subject.

The market for windmills can, I think, be enlarged considerably beyond the Aleppo province. The large plains of the Adana vilayet, which are devoted to agriculture, should furnish a fine opportunity.

Any firm desiring to build up this trade in Syria, my informant urged, would have to send an agent with practical knowledge of the working of the machines, and be prepared to furnish duplicate parts and render assistance in cases of small accidents, which, in the absence of such aid, would be regarded as fatal by the agriculturist and speedily ruin all hope of extension of the trade. This condition, I may say, he regards as so important that upon its acceptance by the firm with whom he has communicated depends a large order; and my own knowledge of the people assures me of the hopelessness of any effort in this direction which is not supplemented by the services of a practical man in the territory worked. One with headquarters at Adana and another at Aleppo would, I think, suffice.

The following is a list of firms who, I understand, will be pleased to enter into correspondence on the subject of the exportation of American-made windmills; they would also be pleased to act as general agents for American manufacturers and exporters.

ALEPPO.

T. N. M. Alteras; importers of hardware and ironmongery; agents for the Singer Manufacturing Company, New York, and of S. D. Modiano, Constantinople. Branches at Alexandretta, Antioch, Aintab, and Killis.

Pochés Frères & Co.; general export and import agents. (Mr. Poché is United States consular agent.)

Vincenzo Marcopoli & Co.; grain, wool, and general produce exporters; agents for the Messagerie Maritime Steamship Company; general export and import commission agents.

Zollinger & Co.; commission agents; specialties, importation of dress stuffs, hosiery, and German goods; agents for the Zurich Fire Insurance Company.

H. de Picciotto & Co.; general commission agents; importers of

Austrian and Italian cotton and woolen manufactures, silk goods, and toilet articles.

D. Bigneau & Co.; general import commission agents, bankers, and exchange brokers; trading in fancy goods, etc.

ADANA.

Mr. Calothy; recommended by the United States consular agent at Mersine.

At Aleppo, Adana, and Mersine there is a branch of the Imperial Ottoman Bank.

HORACE LEE WASHINGTON,

ALEXANDRETTA, *October 27, 1898.*

Consul.

MARKET FOR AMERICAN FURNITURE IN SYRIA.

There appears to be little or no importation of wooden articles of furniture into this district, except in the line of chairs. Since factories do not exist, all ordinary articles are made by hand by local workmen. The work is of a poor type and the prices high. I am excepting specialties, such as Damascus inlaid work, and refer solely to ordinary articles of use, as dining tables, sideboards, clothes chests, chairs, office desks, etc.

The one article which is brought to this district is a cane-seated, twisted-wood chair imported from Austria, not put together, and which sells throughout northern Syria for about \$1.

It is a type very popular in the United States. The outer frame of the back is formed of a piece of round wood, bent into the shape of a U which bulges at the base. The ends of the U form the two back legs of the chair. A shorter piece of the same material, bent in the same way, has its two ends fastened to the seat of the chair, and its base meets the base of the outer frame on the under side of the frame and at the top of the chair; the second U fitting within the first. The cane seat is circular. The two front legs are of the same round wood as the rest of the chair, and the four legs are braced on the inside by a circular ring of the same material, about 4 inches from the seat and parallel to the plane of the seat. Nineteen out of twenty chairs here are of this type, in office, dining room, parlor, and sleeping room. I earnestly recommend that such a type be avoided in shipments here. Novelty of design will appeal as much as a cheaper price. This consulate has them because it was impossible to get others except at a large cost, as they would have been made by hand.

Owing to the climate, iron bedsteads are universally used; and

these must be provided with a framework to support mosquito ~~nets~~. Petroleum stoves for heating purposes, of an attractive design, should also find a ready sale.

The ordinary freight route, involving transshipment in England and at Alexandria, which is costly, should be avoided by charter of a sailing vessel. There are at this moment four or five sailing vessels en route for New York and Baltimore from this port. Yearly, there are perhaps about twelve. These vessels should be chartered for the return voyage at a price which would enable shipments to be made to the ports of the Syrian coast on a profitable basis. Also, I understand that negotiations are on foot for direct steamship communication. I would suggest to any interested parties that they correspond directly with Mr. Calothy, at Adana, Asia Minor, and Messrs. Poché Frères, Aleppo, Syria.

I quote from letters from our consular agents at Aleppo and Mersine, in answer to a request from this consulate for an expression of opinion as to the possibility of a market for American manufactures, furniture more especially. Consular Agent Viterbo writes from Mersine:

I am confident that a large trade could be built up between America and the Syrian coast in all the cheap articles which are manufactured in our country.

The retail prices of the pieces of furniture, as per the catalogues which you send, are very cheap, but it would also be well to know what would be the prices in bulk. I think a good business could be established in the common cotton clothing manufactured in America and called "cabot." I see that there are already some importations of that article, and I imagine that a manufacturer's agent here would readily sell large quantities of it.

Mr. Calothy, an American citizen of Adana, is the only merchant I would heartily recommend to you for the purpose of building up a trade with the United States. I can give him my personal guaranty. I have spoken to him already about the matter, and he is disposed to start business on that line.

Consular Agent Poché is not as hopeful of possible results as Mr. Viterbo, and it should be remembered that Aleppo is 98 miles inland, without railroad connection; but he states:

There are no furniture merchants in this city; but, in case any manufacturer desires to send a small consignment of goods for his account, the firm of Frères Poché & Co. will undertake the sale of the articles.

The import tariff is 8 per cent ad valorem.

HORACE LEE WASHINGTON,
Consul.

ALEXANDRETTA, *October 27, 1898.*

TRADE OPPORTUNITIES IN EGYPT.

From an article on Egypt in a European trade journal, quoting from the current report of the British chamber of commerce of Alexandria, I give the following summaries, which may be of interest to American manufacturers:

Plowing, thrashing, and general farming implements are not used much in Egypt, except on very large estates and Government lands; yet the country, being flat, is very suitable for their use.

There is now an increased demand for pumping machinery, due to Government permission to irrigate in Upper Egypt. Centrifugal pumps of 36-inch and 40-inch diameter, mostly of English and French make, are in use.

Many railways have been constructed along the newly made agricultural roads, and are proving of great benefit to the cultivators; but the orders for the necessary machinery and tools went, almost without exception, to England.

Electric lighting is a branch of trade which is progressing, especially for household purposes. It will meet with public favor, as it is offered at a cheap rate. In that hot climate, it is far preferable to the poor quality of gas supplied by the gas company.

Commercial travelers in Egypt should be familiar with the French and Italian languages, as these are most commonly known among the middlemen with whom they would have to deal; and the visits of these agents, it is claimed, "could not fail to have an influence infinitely superior to the most lavish distribution of trade circulars."

The trade literature should be either in French or Italian, the weights and measures of the metric system employed, and price quotations made in terms of the Egyptian tariff piaster, of which 97½ are equivalent to £1.*

In the Soudan, where a long-continued despotism has resulted in impoverishing the population, only cheap goods will, in the immediate future, find a ready sale.

There is a considerable importation of certain articles of American manufacture, such as horseshoes, hand pumps, small machine tools, and even large machine tools and locomotives.

E. THEOPHILUS LIEFELD,

FREIBURG, *November 11, 1898.*

Consul.

*The Egyptian pound of 100 piasters equals \$4.943.

COMMERCIAL GROWTH OF THE KONGO FREE STATE.

Consul-General Lincoln writes from Antwerp, November 11, 1898:

In 1885, at the time of the foundation of the Kongo Free State, five European firms controlled the trade of the river basin. The *Nieuwe Afrikaansche Handels Venmoetschap*, a powerful Dutch company, of Rotterdam, had a capital of \$772,000. This company owned in the Kongo and along the western coast of Africa eighty stores, employing about one hundred and fifty white agents, served by five small steamers and placed in communication with the Mother Country by a liner, the *Afrikaan*. Not only had this company established along the shores of the river and along the coast numerous branch houses, but also a large number of secondary trading stations, managed, as a rule, by Portuguese. The company also owned at Banana and Nokki thirty-five stores, and it can be said that the greater part of the goods sold to the negroes of the Lower Kongo was imported by this firm from Rotterdam. Banana was the principal seat of the society, and the residence of the company's manager. The other principal stores were at Boma and Nokki, on the river, and at Landana, on the coast.

The firm of Daumas, Beraud & Co. founded, in 1855, the first trading settlement in the Kongo. It owned twelve trading stations along the shores of the Kongo to Nokki, also along the coast, and even possessed landed estates in the interior as far as San Salvador. The principal seat of the company was at Boma.

The firm of Hotton & Cookson, of Liverpool, had its principal factory at Boma. The Central African Trade Company, an Anglo-Portuguese joint-stock company, the head offices of which were in Lisbon, had among its founders English and Portuguese capitalists. It became transformed later into an English company, with a capital of \$482,000, under the name of the British Kongo Company, the head offices of which were in Manchester. This company owned nine stores on the Kongo and two on the coast. The firm of Valle y Azevedo, of Lisbon, was the only independent Portuguese firm along the river.

Such was the situation when the Free State established its authority along the extensive territories of the Kongo basin. There were almost no Belgian imports at that time, and no Belgian firm had established commercial relations in that region. In 1898, thirteen years later, the activity of the Belgians had created in the heart of the mysterious Dark Continent twenty-four commercial companies,

with a capital of about \$19,000,000. Belgian commerce, which in 1885 was almost nil, amounted in 1897 to \$2,509,000 for exports from the Kongo to Belgium and to \$3,088,000 for imports from Belgium to the Kongo, or a commercial movement of \$5,597,000. There are few instances in the history of colonies of so rapid a commercial development. The country is hardly explored before merchants and manufacturers come forward and found companies for the building of new railways, create new plantations for the numerous rich tropical products, raise cattle, and build hotels and trading posts.

In consequence of the King's speech* at Antwerp on October 16 last, Belgian capitalists have become interested in the project of establishing a line of steamers between Antwerp and the Kongo Free State, to be manned and officered by natives of the country. The idea, as reported, is to put shares on the market at such a rate that the people will be able to subscribe for them; and it is confidently expected that there will soon be a considerable increase in the Belgian merchant marine.

The brilliant results obtained by certain commercial companies and the success of the railroad undertaking have drawn the attention of financiers to the great value of the territories of the Kongo Free State. The feeling of distrust which prevailed twelve years ago concerning the success of the "Kongo affair" has therefore disappeared, to make place for solid confidence. Speculation has been aroused, and the Free State is doing its best to put a stop to excesses in this direction. Very different is the condition of affairs to-day from what it was ten years ago. It is only necessary to bring back to mind the efforts of the promoters of the first Kongolese company, the Society for Commerce and Industry in the Kongo, Messrs. Thys, Coquilhat, Valcke, and Vandevelde. To gather the necessary sum of \$193,000 for the foundation of the company, a hundred lectures were given in the principal towns of the country for the purpose of spreading a knowledge of the Kongo resources and to make the public share their own confidence in the future of the colony. The funds, however, were slow to come in and were subscribed without enthusiasm. Subscription blanks were addressed to more than three thousand people, and it took two hundred and seventy-eight subscribers to collect the required sum of \$193,000. The most generous—two powerful joint-stock companies—risked \$2,895. The others only engaged themselves for sums varying between \$1,930 and \$96.

Very few among these subscribers really thought they were making a good investment for their money. Many subscribed simply from a patriotic feeling, or even to affirm their devotion to the King.

*See CONSULAR REPORTS No. 220 (January, 1899), p. 29.

But to-day, confidence prevails in the affairs of the Kongo, and Belgian capitalists no longer hesitate to invest large sums of money in undertakings which prove so profitable.

Belgian companies are even founded to develop other colonies, such as the Belgian Joint Stock Company for the Development of Commerce and Industry in the Equatorial Provinces of Abyssinia, and the Comptoir Commercial de Benguela, which will develop the Portuguese Kongo. Demands for concessions are constantly coming in to the Kongo State, which is obliged to adjourn consideration of them for two years, the necessary delay for the limitation of concessions already granted. The work accomplished is really a great one, if account is taken of the difficulties overcome, insufficient means of transportation, ignorance of the needs and tastes of the natives, and the untrained staff of officials to be initiated into the ways of colonial business. The greatest obstacle has now disappeared; the Kongo Railway has opened up Africa to the activity of Belgian enterprise. By it, the trading posts will be easily and regularly provisioned, and a number of products which could not be handled on account of the high price of transportation will now become the subject of a remunerative traffic, insuring to African trade an almost unlimited development.

In a report dated October 31, the consul-general gives the following recently published statistics in regard to the Kongo:

Number of Belgian inhabitants, 1,060; acres cultivated by the State, 24,710; acres under concession to private parties, 79,072,000; coffee trees, 4,000,000; cacao trees, 125,000; tobacco plants, 76,000; steamships on the Upper Kongo, 41; tonnage, 1,060.

ELECTRIC WORKS IN LOURENÇO MARQUEZ AND NATAL.

In his annual report (to appear in Commercial Relations, 1897-98), Consul Hollis, of Lourenço Marquez, speaking of the prospects for improvement in trade in the colony, says that there is a disposition on the part of financiers of the Transvaal to invest money there. Already \$250,000 have been spent by the Compagnie Générale d'Electricite, which has just completed an electric-light station—the best equipped, Mr. Hollis says, that he has seen in South Africa. He continues:

The buildings have all been built of hollow French brick, with iron beams and girders. Three large engines and six dynamos have been installed. All the boilers, machinery, and fittings have been supplied by the Fives-Lilles Company, of Rhone, France. Upon

the iron posts that have been planted along the streets I have, however, seen the marks of an English firm. This company has a concession for fifty years to supply electricity for light and power, and also for the sale of electric lamps and fittings. The company has already contracted with the municipal chamber to maintain six hundred 16-candlepower incandescent street lamps at an annual charge of £1,700 (\$8,273.05) per annum.

The government here, some time ago, gave a Belgian syndicate a concession of fifty years to build and operate an electric street railway. On the 5th of this month (October) the Belgian consul here, who represents the holders of the concession, submitted the plans for the said railway to the municipal chamber, where they were approved and passed the same day. By the terms of the concession, work on the line must begin within nine months from October 5, 1898, and in nine months more the line must be completed and open for traffic. The plans provide for about 4 miles of the overhead-wire street-railway system. In about a month, an engineer will arrive from Belgium to make the preliminary surveys.

Although Durban, Natal, is not in my consular jurisdiction, I do not think that it will be out of place for me to mention here that the Durban town council is about to appoint a commission of two engineers to investigate and report upon the electric street-railway systems of America and Europe, in order that they may intelligently decide upon the best system to be installed in Durban.

UNITED STATES TRADE WITH COLOMBIA.

Consul-General McNally, of Bogotá, in his annual report (to appear in full in Commercial Relations, 1897-98), after referring to the commercial depression in Colombia during the past year, on account of the change of administration and the small coffee crop, says:

Careful inquiry points to the encouraging fact that United States manufacturers have perhaps suffered less than those of other countries in this market. This is attributed to the acknowledged merit of the American products which have gained a foothold here. In the matter of boots and shoes, a line in which the excellence of our products is admitted, a wider market should be had, and probably could be had by giving more heed to Colombian taste in this regard. Certain styles are preferred, and others, though more acceptable in the United States, are not so readily received. It is admitted that American cotton fabrics stand at the head, but, as an offset, dealers say that fabrics of less merit but of lower price sell better. There

should be a good opening here for the cheap and modern grades of American furniture, since the domestic article, although substantial, is produced by rather primitive methods and, as a rule, a variety of styles is lacking. Material for furniture is brought from a distance, carrying being done on the backs of natives or mules. The finishing is almost always done by hand, machinery being very little used. I believe that simple and labor-saving machinery would find a ready market here. American silver-plated ware is admitted to be the best that comes to this market, but there are European products in this line that sell at lower prices.

As a rule, United States machinery is preferred, when our manufacturers can be induced to bear in mind the hard transportation conditions and consent to construct their machinery accordingly. This relates especially to machinery for coffee or sugar plantations. American ranges (steel), with economy of detail and manufactured with a view to close and safe packing, have found ready sale.

It should be noted that some manufacturers have been willing to take advice from those that know what is necessary, and are sending their goods packed as well as those from Europe.

The matter of credits is always of deep interest. European houses give six and twelve months' credit, and some of them extend this to eighteen months, charging interest on the sales. When one considers that the time required to ship goods is from six to twelve months, it is not to be wondered that merchants complain of short credits; for it sometimes happens that the time for payment expires some months before they receive the goods.

A United States corporation, known as the Colombian Traction and Express Company, has brought into this country a traction engine and train of cars, with a view to operating this system between Bogotá and the Magdalena River. The express business has been inaugurated in Bogotá, and the contrast of the magnificent horses and the neatly painted wagons with the cumbersome and easy-going ox teams is not only marked, but is a revelation to the Colombians.

Our trade in cotton goods suffers because United States exporters will not send them in the lengths desired. The Manchester goods come in the following pieces: Whites, 24 yards; grays, 18 yards; prints, 30 yards.*

*In spite of these drawbacks Consul Madrigal, of Cartagena, in his annual report, notes that prints and cotton goods from the United States are preferred to all others in that part of the country, on account of their excellent quality.

IMPORTS INTO GUATEMALA.

The consul-general at Guatemala, Mr. Beaupré, in his annual report (to appear in Commercial Relations, 1897-98), says that the United States has maintained her lead in imports into that country during the past year, and in some important lines the gain has been most gratifying. With Great Britain and Germany, she practically controls the foreign trade of Guatemala. In the past four years, the imports have been supplied by these nations in the following proportions:

Year.	United States.	Great Britain.	Germany.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1894.....	26	24	13
1895.....	36	21	23
1896.....	34	23	22
1897.....	33	21	21

The decrease in the last two years has been due to commercial depression throughout the country. The consul-general adds the following details as to the imports:

Cotton goods, cloth and thread, are far the most important in point of value, and Great Britain has ever maintained first place, Germany occupying second, and the United States third. In 1894, Great Britain's share of this line was 73 per cent of the whole, Germany's 17 per cent, and the United States 6 per cent. In 1895, the ratio stood: Great Britain, 57 per cent; Germany, 21 per cent; and the United States, 8 per cent. In 1896, Great Britain had 58 per cent; Germany, 14 per cent; and the United States, 10 per cent. In 1897, Great Britain had 58 per cent; Germany, 18 per cent; and the United States, 15 per cent—showing a continuous gain for us. A little more attention to the designs and bright colors required by this market and personal attention by traveling men who speak Spanish, and our rank can be easily raised.

In woolen goods and silk, our trade is very small, Germany standing first in the former and France in the latter.

Hardware, iron, and steel in all its forms, agricultural implements, machinery, electric-light fixtures, glass, paints, oils, etc., are largely used, and the United States has a fair share of this trade.

Galvanized corrugated sheet iron is quite extensively sold; but our manufacturers have paid little attention to this branch, and most of it comes from Great Britain.

Galvanized barbed fence wire is in demand, most of it coming from the United States and Germany; more from the latter country than seems warranted by our capacity to produce it. Freight from San Francisco is about \$10 per ton.

This will never be a good market for agricultural machinery, on account of the mountainous character of the country; but such farm tools as hoes, axes, picks, shovels, machetes, and forks are used in large quantities. Hoes have the greatest sale, because they are used on coffee fincas in clearing the land of brush and weeds. They should be large, of the finest steel, and have a round eye for the handle. The axes must also have round eyes, instead of the oval form used in the United States. The latter does not sell well here, for the Indian insists on making his own helve. These articles, as well as the machetes, should be especially made for this trade. Hunting knives in ornamental sheaths sell extensively.

The United States supplies most of the builders' hardware, but there is not a great demand for it at this time.

The manufacture of sugar is assuming large proportions, and there is and will be a good market for the requisite machinery. This can also be said of machinery for preparing coffee.

Almost everything in the line of groceries comes from the United States. There is a large sale for canned goods—vegetables, meats, and preserves. Condensed milk and evaporated cream are increasing in demand.

In general, it may be said that the bulk of United States goods is too good for this market. They should be made to sell cheaply, but should be showy with colors and tinsel. Most of the granite ware comes from Germany, because of the low price; but it is so light and cheap that it can not last long.

NAIL TRADE IN MEXICO.

In answer to a request for information from a resident of Oklahoma, a Department instruction, dated April 29, 1898, was sent to consular officers in Mexico asking for details in regard to the nail trade. The answers are given below.*

CITY OF MEXICO.

Consul-General Barlow says, under date of May 23, 1898:

Wire nails are chiefly used in this Republic, the reason of this, in my opinion, being that there are more wire than cut nails in a kilogram (2.2046 pounds), and the duty is the same.

*Advance Sheets of the reports have been sent to the Inquirer.

Almost all the nails are imported, chiefly from the United States, as the figures given below show. The duty on wire and cut nails is 10 cents (4.7 cents in United States currency*) per kilogram.

I know of but two nail manufactories of any importance in this Republic—the Monterey Wire Nail Company, of Monterey, and a cut-nail factory at Chihuahua. The material is no doubt imported principally from the United States. The nail trade is handled through jobbers. The import duty on rod is 4 cents (1.8 cents) per gross kilogram if 1 millimeter (0.0394 inch) or over in diameter, and 6 cents (2.8 cents) per gross kilogram if 1 millimeter or less in diameter.

Barbed wire is now extensively used in this Republic, the demand being on the increase. As the table given below will show, there were 5,314,042 kilograms (11,715,334 pounds), valued at \$212,807 in Mexican currency (\$111,295†), imported into the Republic during the fiscal year 1896-97.

Importations during fiscal year 1896-97.

Whence imported.	Barbed or fence wire.			Nails, tacks, screws, nuts, bolts, and rivets.		
	Quantity.	Value.		Quantity.	Value.	
	<i>Kilograms.</i>	<i>Mexican.</i>	<i>U. S.</i>	<i>Kilograms.</i>	<i>Mexican.</i>	<i>U. S.</i>
Germany	162,024	\$7,001	\$3,661	474,402	\$44,633	\$23,342
Austria				147	61	31
Belgium	52,618	2,515	1,315	43,461	2,952	1,543
Spain	24,700	838	438	6,385	434	226
United States.....	5,035,998	200,530	104,881	2,090,308	151,123	79,037
France	22,413	1,014	530	263,176	26,930	14,089
England.....	15,298	900	470	263,069	25,329	13,247
Italy.....				1,302	215	112
Sweden.....				15,401	2,454	1,283
Switzerland				60	89	46
Total	5,314,042	212,807	111,295	3,157,712	254,229	132,956

NOTE.—It is not possible to give the quantity and value of the importations of nails alone, as the tariff does not consider them separately.

CHIHUAHUA.

On May 5, Consul Mills writes:

Both cut and wire nails are used in this district, but cut nails principally. The greater portion of both kinds is manufactured in Mexico, but only cut nails are made here. The Companio Industrial de Chihuahua holds a concession for making nails freeing it from all taxes for twenty-five years.

* The United States Director of the Mint values the Mexican dollar, October 1, 1898, at 47.4 cents.

† The average value of the Mexican dollar during the period mentioned was 52.3 cents.

Barbed wire is used in Mexico for fencing and will be more extensively used in future, but I believe it will ere long be manufactured here, probably under a concession. The duty is 1 cent per kilogram (0.047 cent per 2.2046 pounds).

CIUDAD JUAREZ.

Consul Kindrick, under date of June 1, writes:

Wire nails are largely used in Mexico. There are several factories, but none are in this consular district. These do not, however, supply the demand, as there are importations of wire nails from the United States.

Barbed-wire fencing is used in the State of Chihuahua, principally on the cattle ranches.

Weight and value of nails, tacks, and screws imported into Mexico through the Juarez custom-house from July to December, 1897.

Month.	Quantity.	Value.
	<i>Pounds.</i>	
July	14,840	\$280
August.....	770	35
September	20,765	438
October	13,480	265
November.....	17,050	300
December.....	14,735	390
Total.....	81,640	1,708

CIUDAD PORFIRIO DIAZ.

Consul Snyder says, under date of May 22:

In this section of Mexico, cut nails are mostly used. The prices are considerably higher than in the United States; and in this section of the State Coahuila, most of the nails are imported.

Barbed wire is extensively used here now for fencing. The timber supply in this country is very limited. The importation of nails, wire, and wire rods for the last fiscal year were as follows:

Articles.	Quantity.	
	<i>Kilograms.</i>	<i>Pounds.</i>
Nails.....	243,259	536,288
Wire.....	26,236	57,839
Wire rod.....	1,085	2,391

LA PAZ.

On May 17, Vice-Consul Viosca says:

Cut nails are chiefly used in this district, and they are all imported from the United States.

Barbed wire for fencing is extensively used on this coast, and the demand bids fair to increase. It is impossible to ascertain the volume of imports of nails for the last fiscal year, but at a close estimate I should consider the importation to be about 12,000 to 15,000 pounds yearly.

MATAMOROS.

Consul Valls, on May 12, writes:

There is no company operating in this district. The trade is handled by the large importers.

Barbed wire has been in use here since 1885, and has almost entirely replaced the old brush fence previously used by the ranchmen.

Wire for telegraph and telephone purposes is admitted into Mexico free of duty.

The import of nails and wire in the Matamoros district for last fiscal year was as follows: Barbed wire, 100,984 pounds; nails, wire and cut, 36,106 pounds.

MONTEREY.

Consul-General Pollard, on May 21, says:

Cut and wire nails are used in Mexico in the ratio of about 40 per cent of the former to 60 per cent of the latter. Wire nails are preferred to cut nails, and the demand therefor is increasing rapidly. Wire nails are manufactured at Monterey. The factory is exempt from municipal and State taxes for ten years. The trade is handled through jobbers and retailers.

Considerable barbed wire has been imported within the last few years. This trade, however, is only in its incipency, as this style of fencing is peculiarly adapted to Mexico. The scarcity of timber in this part of the country makes it a necessity.

The output of the wire-nail factory is 100 kegs daily. It has recently changed hands, however, and it is understood the capital and capacity thereof will be considerably increased. This mill is understood to supply no more than 50 per centum of the demand

for nails, but under the new management this shortage is expected to be obviated.

Monterey is said to be surrounded by inexhaustible deposits of iron ore, from which rails, bar iron, wire nails, etc., can be produced. Capital and enterprise, it is understood, are the only requisites to this end.

NOGALES.

Consul Darnall writes, on May 12:

The nails used in Sonora are chiefly cut. They are all imported from the United States.

The trade in this consular district is handled mostly through retailers.

Barbed wire is used almost exclusively for fencing in this State.

The amount of nails imported into this district during the fiscal year ended June 30, 1897, was: Cut nails, 138,155 pounds, valued at \$3,037; and wire nails, 33,863 pounds, valued at \$847.

SALTILLO.

Consul Towle sends the following, under date of May 7:

Both cut and wire nails are used in northern Mexico, the latter having the preference. From interviews with hardware merchants of this city, I am able to state that the greater portion of the nails sold in this region, both cut and wire, are imported from the United States.

There are no nail mills operating in my district. There is a wire-nail factory at Monterey, about which the Department will doubtless receive full information from that point. This mill imports, mainly from the United States, the wire (not the rods) from which the nails are manufactured, and the product is said to be inferior to that produced in our northern factories. As a gentleman from St. Louis, who has been prominent in the hardware trade at that point for a quarter of a century, said to me the other day, "They don't get the heads on straight."

There is also a cut-nail factory at Chihuahua (outside of my district), with six machines. This factory imports from the United States the plates from which the nails are cut.

There seems to me to be an excellent opportunity for our hardware men to open up a trade in both nails and barbed wire in that portion of Mexico which lies between Laredo and San Luis Potosi, but they must have the tact to adapt themselves to the leisurely business ways and customs of this Republic, and not try to work it by the same brisk methods they employ in their own country.

NUEVO LAREDO.

Under date of June 13, Consul Mahone writes:

Wire nails are chiefly used here; they are manufactured in Mexico and are also imported from the United States. The wire used in the manufacture comes in rolls instead of rods. The trade here is principally handled by retailers. There is no mill in my district, but at Monterey quite an important business transaction has just been consummated. The Monterey nail works have been purchased by Messrs. Youree, of Shreveport, La. Additional machinery will be put in at once for the manufacture of tacks, horseshoe nails, pins, and hairpins. The new management will run the entire works from now on to its full capacity.

TAMPICO.

Consul Magill says, on May 10:

Both wire and cut nails are in use in this district, but the demand for the former is the greater.

Wire nails are manufactured in Monterey and cut nails in Chihuahua. The material is procured from England, the United States, and Germany.

Statistics of imports for the last fiscal year not having yet been made up at the Tampico custom-house, I regret my inability to furnish them.

Imported nails come from England, the United States, Germany, and Sweden.

The consular agent at San Luis Potosi, Mr. Farwell, writes me that wire nails have met with favor in that section, and the use of barbed wire is growing.

TUXPAN.

Consul Jones transmits a report, under date of April 29, covering practically the same information as that given above.

FURNITURE AND LUMBER IN PARAGUAY.

Although the forests of Paraguay abound in cabinet woods, the prices of furniture are very high. A duty upon furniture of 50 per cent ad valorem, and 5 per cent additional for educational and industrial expenses, serves to keep out imported articles so successfully that only \$4,572 worth was brought in during all of last year; and transportation facilities within the country are meager, there being but one railroad in Paraguay, and the art of furniture making has not passed the stage in which everything is made by hand. There is no factory in the country, and every carpenter is a maker of furniture. There are only about five sawmills in Paraguay, three being in Asuncion, and, on account of the wealth of timber and the high prices for furniture which will prevail as long as the high tariff lasts, it would certainly seem that capital invested in sawmills here would be remunerative, as these five sawmills can not supply the demand.

In response to many inquiries, I give below a price list of house furnishings given me by Ramon Semente & Co., the largest furniture dealers in Asuncion:

12 cane-bottom chairs.....	\$20. 00
1 sideboard.....	58. 00
1 side table, marble top.....	27. 00
1 dining table for eight persons.....	9. 00
Parlor:	
1 side table.....	15. 00
1 center table.....	16. 00
6 chairs, 2 armchairs, 2 rocking-chairs, 1 sofa.....	100. 00
Sleeping room:	
1 towel rack.....	\$1. 80
1 large double bed, with springs and mattress.....	39. 00
1 washstand, very large.....	50. 00
2 wardrobes with looking-glasses.....	88. 00
Total.....	422. 80

Another estimate with somewhat better furniture is \$500.

Uruguay and the Argentine Republic receive their lumber supply from Paraguay. The great expanse of prairie land in the former countries precludes the possibility of forest land, so that Paraguay is their nearest market. There is an abundance of timber of many varieties, including those suitable for shipbuilding, general carpenter work, furniture, cabinetwork, or musical instruments. Cedar of good quality is found. From some trees, dyes and ink are made; from others, resin is obtained; the bark and gum of some are used for medicinal purposes. One species, the *Urundei para*, is worthy

of especial mention. It is probably the most durable wood, and is extensively used in making bridges, since it petrifies when kept under water for a length of time.

Another inducement for an outlay of capital in this State is the low price of labor and the cheapness of living. Besides, there is a ready market and practically no competition.

While the importation of furniture is very slight, owing to the high duties, yet some of the products of our skilled labor, which would be complete innovations here, ought to find a market on account of their utility—for example, folding beds. I have not seen a folding bed in a store or elsewhere since I have been in the country.

In conclusion, I would express the opinion that the present conditions, as above set forth, do not favor the importation of furniture in general, but that there is need of machinery to prepare the lumber for the market, the machinery for sawmills and planing mills, and for the manufacture of furniture.

JOHN N. RUFFIN,

ASUNCION, *September 30, 1898.*

Consul.

COLLARS AND SHIRTS IN PARAGUAY.

Owing to the semitropical climate of this locality, the people of Paraguay use light weights of cotton and linen goods extensively; and, as there are no factories in the country, the entire supply of these goods comes from foreign parts.

The kind of collar commonly known as the "fat man's collar" would be a very desirable article in these "localities of perspiration." I have not seen one of this style in all Paraguay. I brought a few from New York with me, and many dealers here have become interested in them. Collars are sold here for between 25 and 30 cents (gold) each. The duty is 25 per cent ad valorem.

The business houses which would take interest in this trade and with which correspondence would be profitable are the Gran Casa Francesa (the Great French House), the Casa Blanca (the White House), and the Bazaar Ingles. All are situated in Calle Palma. Communications might also be sent to the "Secretario del Comercio Central."

Plain-bosom shirts, open in the back, would be favorably received. This style is very scarce. Nearly all are made to open in front. Shirts of any material—cotton, linen, or otherwise—would have a sale. The poorer classes wear the cheapest qualities of plain white cotton. The richer classes purchase the very best qualities.

Goods imported into Paraguay have to be transshipped thither

from the ports of Uruguay or the Argentine Republic, which will explain the apparently misleading statistics of the following table, showing the total importations of collars and shirts into Paraguay during 1897 to have been from the above-mentioned countries:

Description.	Duty.	Official value.	Quantity.	Argentine.		Uruguay.	
				Official value.	Quantity.	Official value.	Quantity.
Collars:	<i>Per cent.</i>	<i>Gold.</i>	<i>Dosen.</i>		<i>Dosen.</i>		<i>Dosen.</i>
Linen.....	25	\$1,670	979	\$43	25	\$1,627	954
Cotton.....	25	1,034	883	71	71	963	812
Shirts:							
Bosoms of linen without collars.....	50	923	95			923	95
Plain cotton for women..	50	35	6	3	1	32	5
Plain linen for women...	50	48	4			48	4
Cuffs for shirts.....	50	485	286	9	6	476	250
Total.....		4,333		126		4,207	

JOHN N. RUFFIN,
Consul.

ASUNCION, *September 30, 1898.*

BIDS FOR COAL IN BRAZIL.

It may interest the American coal trade to learn about the bids which were tendered to the Brazilian Government, on October 31, for 120,000 tons of steam coal for the Central Railway of Brazil.

The bids were as follows:

(1) Toms Creek Coal and Coke Company, of Virginia, to deliver at the wharf at 25s. 10d. (\$6.28) per ton, plus 2 milreis (28 cents) to the wharf.

(2) The Brazilian Coal Company, Cory Brothers, to deliver in the railway wagons at 32s. (\$7.79).

(3) Visconde Rodrigues de Oliveira, to deliver best Cardiff c. i. f. at 29s. 9d. (\$7.24).

(4) The Tredegar Iron and Coal Company, to deliver Tredegar coal c. i. f. at 29s. 10d. (\$7.26).

(5) Empresa Industrial Brasileira, Candido Caetano Ferraz, to deliver Cardiff best steam c. i. f. at 29s 9d. (\$7.24).

(6) Norton Megaw & Co., New River coal, run of mine, c. i. f. at 27s. 11d. (\$6.79).

(7) John Sunley & Co., London, Wilson Sons & Co., to deliver best Cardiff steam coal c. i. f. at 31s. 9d. per ton (\$7.72).

(8) John Carew & Co., to deliver Virginia coal c. i. f. at 28s. 6d. per ton (\$6.93).

(9) João Cordeiro da Graça, to deliver best Cardiff steam coal c. i. f. at 28s. 9d. (\$6.99) per ton.

(10) Marianno de Medeiros, to deliver best Cardiff steam coal c. i. f. at 28s. 9d. (\$6.99) per ton.

(11) Lage Irmãos, to deliver Powell Duffryn coal in the cars at 33s. (\$8.03) per

ton; to deliver Crown patent fuel in the cars at 32s. (\$7.79) per ton; to deliver 50,000 tons of Pocahontas steam coal into the railway wagons at 29s. (\$7.06) per ton, exclusive of Clause III of the call for tenders.

The bid No. 11 of Lage Irmãos was made, it will be noted, "exclusive of clause 3 of the call for tenders," which reads as follows:

The coal must be delivered in large lumps; not more than 5 per cent of small coal of the size of 30 cubic inches being admitted.

It will be seen by the above that one of the American bids, that of the Toms Creek Coal and Coke Company, of Virginia, for 25s. 10d. is far the lowest of all. The American coal offered in competition with the so-called Cardiff coal is certainly of equal quality if not better than the English varieties, and therefore it would seem that the contract should be awarded to the Americans. The matter, however, will probably not be decided before the new President has entered upon his duties, November 15.

In connection with this matter, the following newspaper clippings may be of interest:

[From the Brazilian Review.]

The Toms Creek Coal and Coke Company has consigned a trial shipment of excellent coal to this market, which has just arrived and been discharged at a rate that is rather unusual in this easygoing port, 6,000 tons having been discharged in nine days, or 650 tons per diem, whilst the usual rate does not much exceed 250 tons. The Toms Creek coal comes from Pulaski, in Virginia, and is said to be better for steam purposes than even the Pocahontas, that so much has been heard of lately. At present, what with the dissatisfaction caused by the strike and substitution of Scotch coal for Welsh, taken with the dissatisfaction rampant amongst coffee shippers, many of whom would support a movement that would insure competition with the actual shipping lines, the moment could not be better chosen for an attack on what hitherto was regarded as a British monopoly, and which Britishers will have to look sharply after in future if they do not wish to lose it.

[From the Times of Argentina.]

We have seen the Pocahontas coal from Virginia that has lately arrived here, and, unless more care be taken in screening it, the chances are that strong complaints will be made by consumers. The coal is very soft and liable to crumble. It does not bear much handling, and special care should therefore be exercised in having it well screened before shipment. The samples we have seen contain too much dust for any practical purpose, but we presume that more care in the shipments will be taken in future, if there be a disposition on the part of those interested to cater for a hold in this market. Both the Norfolk and Newport News coal have sufficient difficulties to contend against with regard to freight and quality as compared with Welsh coal, without having those difficulties increased by means of insufficient screening.

EUGENE SEEGER,

RIO DE JANEIRO, *November 8, 1898.*

Consul-General.

INQUIRIES FOR AMERICAN COAL IN FRANCE.

Consul Skinner, of Marseilles, under date of November 15, 1898, writes as follows:

The steam-coal supply of Marseilles has been quite unsatisfactory of late, owing largely to a shortage in the British output, and I have been asked by one large house about the prospect of securing coal from the United States. The specifications submitted to me are as follows:

A coal resembling best Welsh is wanted, that is to say—

(1) Not giving more than 1 to 7 per cent of ashes.

(2) Developing 8,000 to 8,500 calorific power.

(3) Containing the least volatile matter.

If American coal companies can supply the coal desired at the right price, the opportunity for entering a new and important market awaits them. The published market reports quote Cardiff coal at 40 francs (\$7.72) delivered in the coal bunkers at Marseilles, and the recognized market authority of the city prints the following from Cardiff to-day:

The price of coal continues firm. The best qualities fetch between 12s. and 13s. (\$2.92 and \$3.16); second qualities, 11s. 6d. and 12s. (\$2.80 and \$2.92). Although orders from the Mediterranean have become more abundant, there has been an augmentation of stocks in the markets, and consequently freights have exhibited feebleness.

While several of the local houses represent British companies in such manner as to operate against their wishing to introduce a new coal, there are others independently situated and prepared to engage in any business enterprise offering good results.

CONTRACT AWARDS IN RUSSIA.

Mr. Thomas C. Purdy, representative of the New York Air Brake Company, has obtained through Consul Smith, of Moscow, a trial order from the Russian Government to equip twelve freight locomotives and two hundred freight cars with their air brake, for which the price paid will be \$25,000. This contract was obtained in competition with French, German, and Russian companies. The Westinghouse air brake has been in use on passenger trains in Russia for about two years, and the Westinghouse Company has purchased a building in this city and is now putting in a plant to fill a trial order

similar to that given to the New York Air Brake Company. Should the order given to the latter company prove satisfactory, it will also build works in St. Petersburg.

There are said to be mechanical difficulties to be overcome in adapting the air brake to the freight locomotives and cars in use on Russian railroads; but should they be overcome, the entire freight equipment, consisting of 10,000 locomotives and 500,000 cars, will be equipped with air brakes as rapidly as possible, the cost of which, it is estimated, will reach \$50,000,000.

A Russian company has been organized to run a line of twenty-one coast steamers from Vladivostock to Port Arthur and leading ports in the Pacific Ocean. Contracts have been awarded for twelve of these steamers.

W. R. HOLLOWAY,
Consul-General.

ST. PETERSBURG, *November 15, 1898.*

BALTIC-BLACK SEA CANAL.

Consul-General Holloway writes from St. Petersburg, November 24, 1898:

During the fall of 1897, the Paris edition of the New York Herald published a statement illustrated with a map showing plans for a ship canal to connect the Baltic Sea with the Black Sea, the least width of which was to be 213 feet at water level and 114 feet at the bottom, so that the largest battle ships could pass through it at a reasonable speed.

This article was reproduced in many leading American newspapers, and I received a large number of letters from engineers, newspapers, contractors, and manufacturers of excavating machinery, asking for specifications, cost of labor, details as to contracts, etc. I called on Prince Hilkoﬀ, Minister of Ways and Communications, handed him a newspaper containing the account, and asked if there was any foundation for the statements contained in the article. He was amused and said:

Some time since, a French engineer called on me with the map from which this is copied, as well as an estimate of the cost of building the same. I asked where he procured the data his estimates were based upon. He said: "From Russian maps." I then informed him that there were no correct maps of that portion of Russia, and his canal was 900 miles short.

The Prince added that the Russian Government had no idea of building such a canal; indeed, he doubted if there was sufficient money in Russia to do so. There had been discussions in the past

as to the propriety of building a canal connecting the Black and Baltic seas large enough to enable gunboats to pass through, but its cost prevented its serious consideration.

I think it would be well to ask American papers to correct the impression that Russia is building or intending to build this ship canal.

NOTES FROM CANADA.

DISPOSAL OF PROVINCIAL LAND.

Two important changes of policy have been recently made by the provincial government, one to the effect that no lands or timber will be sold or disposed of hereafter by the government except under special circumstances. Persons desirous of purchasing lands must apply to the department, showing special reasons why they should be allowed to purchase, before going to any expense in connection with the matter. Under the old law, it was within the discretion of the chief commissioner of lands and works to decide whether he should approve of any application to purchase lands. It is claimed that in the past much of the public land was being alienated; large tracts which could properly have been classed as first or second class land, and appraised at \$5 or \$2.50 an acre, respectively, having been designated as only third class and sold at no more than \$1 per acre.

PROTECTION FOR MINERS.

The second reform is an edict declaring that gold commissioners, mining recorders, and clerks and employees under them connected with the administration of mineral claims, shall not be allowed under any circumstances to take out free miners' certificates or to acquire directly or indirectly, in their own names or in the name of any person for their benefit, any mineral claims or interests in mineral claims of any kind whatsoever. Every such person shall forthwith make a statement to the department of mines, showing what interest, if any, he has in any mineral claims, and such person may, under direction of the minister of mines, be allowed to take out free miners' license, for the purpose only of protecting such interests already acquired.

EXPORT OF PULP WOOD.

I have already called attention to the increasing importance of the pulp industry.* This is being further proved by the attention which the government of the neighboring Province of Quebec is

*See CONSULAR REPORTS No. 220 (January, 1899), p. 146.

giving to the prevention of the exportation of pulp wood to the United States. A member of the cabinet has been forcing the matter upon his colleagues, who do not seem to be anxious to take it up, though it is pointed out that owing to the small supply of the article now in the United States, and to Quebec's almost unlimited spruce forests, this Province can easily dictate terms.

The government is asked to protect Canadian workmen and force the manufacture of pulp in Quebec by imposing a stumpage on all pulp wood cut and giving a rebate of three-fourths on all such wood turned into pulp in Canada. It is believed that if this policy is adopted, many mills would be built along the Quebec waterfalls, such as Grand Mere, where one pulp company has spent about \$2,000,000 in a few years.

MONCTON, *November 17, 1898.*

GUSTAVE BEUTELSPACHER,
Commercial Agent.

PRICES IN DAWSON CITY.

I send herewith the price list of the North American Transportation and Trading Company, giving the prices of necessities in Dawson City the 1st of October. You can not, however, get butter at \$1 per pound at the company's stores, except in 10-pound quantities or over, and then only in case you purchase an entire outfit. The same custom holds good in regard to purchases of condensed milk and sugar. The duty on American goods is so high that almost everything used here comes from Canada and Great Britain. I think if the large companies would adopt the landing-certificate methods and get rebates on tinned goods, sugar, and other articles, more American goods would be brought in. I have spoken to several companies on the subject, but so far only two of them have procured landing certificates—the Standard Oil Company and the Alaska Commercial Company. Strange to relate, in this Canadian town and vicinity, with a population of some 20,000 and a transient population of as many more, not a single trading or commercial company is owned by Canadian capital. Every business is operated by Americans, and the highest prices paid are for American-manufactured articles, such as hats, rubber goods, shoes, and cigars. Three companies supply the Yukon River towns. With the increasing population of this region there will be room for more, especially if there are good returns from the American side this winter.

DAWSON CITY, *October 19, 1898.*

J. C. McCook,
Consul.

Prices in Dawson City.

Articles.	Price.	Articles.	Price.
Bacon.....per pound...	\$0.30 to \$0.50	Axes.....each...	\$3.50
Baking powder.....do.....	1.50	Basins.....do.....	\$0.50 to 5.00
Beans.....do.....	.15	Chisels.....do.....	.25 to 2.50
Beef:		Cups.....do.....	.25 to 2.00
Extract.....per ounce...	.50	Files.....do.....	.25 to 2.00
Corned.....per dozen cans...	9.00	Forks.....per set...	5.00
Lunch.....do.....	9.00	Gold pans.....each...	4.00
Roast.....do.....	9.00	Granite ware.....per piece...	.25 to 15.00
Butter.....per pound...	1.00	Hammers, claw.....each...	2.50
Cabbage.....per dozen cans...	6.00	Hatchets.....do.....	2.50
Candles.....per pound...	.50	Handles.....do.....	1.00
Crackers.....do.....	.25 to .50	Knives.....per set...	6.00
Cheese.....do.....	.75	Kettles.....each...	5.00
Cream.....per dozen cans...	6.00	Nails.....per pound...	.25
Coffee.....per pound...	.75 to 1.00	Picks.....each...	6.00
Corn.....per dozen cans...	6.00	Plates, granite.....do.....	.50
Corn meal.....per pound...	.25	Sledges.....per pound...	.50
Cornstarch.....do.....	.50	Saucers and cups...per dozen...	9.00
Coal oil.....per gallon...	1.50	Stoves.....each...	*25.00
Flour.....per cwt...	16.00	Shovels.....do.....	4.00
Fruit:		Spoons.....per dozen...	3.00
Dried—		Tents.....each...	*25.00
Apples, plums, and		Arctics.....per pair...	6.00 to 8.00
prunes.....per pound...	.35	Blankets.....per pound...	2.00
Peaches, pears, nectar-		Boots:	
ines, and apricots,		Leather.....per pair...	6.00 to 10.00
per pound.....	.40	Rubber.....do.....	10.00 to 20.00
Canned.....per dozen cans...	9.00	Felt.....do.....	6.00 to 8.50
Ham.....per pound...	.60	Calico.....per yard...	.25 to .50
Jams.....per dozen cans...	12.00	Caps.....each...	5.00 to 25.00
Julienne.....per package...	1.50	Coats.....do.....	*10.00
Kidneys.....per dozen...	9.00	Combs.....do.....	1.50 to 2.00
Lard.....per pound...	.30	Drill.....per yard...	.30 to .38
Matches.....per bunch...	.25	Drawers.....per pair...	*2.00
Milk.....per dozen cans...	6.00	Hats.....each...	*6.00
Mutton roast.....do.....	9.00	Handkerchiefs.....do.....	.50
Oats, rolled.....per pound...	.25	Gloves.....per pair...	*2.50
Onions.....per package...	1.50	Jumpers.....each...	2.50
Oysters.....per dozen cans...	9.00	Mitts.....per pair...	*3.00
Pigs' feet.....do.....	9.00	Moccasins.....do.....	3.00 to 5.00
Pease, sweet.....do.....	6.00	Overshoes.....do.....	8.00
Pepper.....per pound...	2.00	Pants.....do.....	*3.00
Pickles.....per pint...	1.50	Robes, fur.....each...	50.00 to 200.00
Rice.....per pound...	.30	Shirts.....do.....	*2.00
Salt.....do.....	.20	Suspenders.....per pair...	*1.50
Sausage.....per dozen cans...	9.00	Socks.....do.....	*.50
Soap.....per pound...	.25	Sweaters.....each...	5.00 to 7.00
Sugar.....do.....	.25 to .30	Shoe packs.....per pair...	5.00
Sirup.....per gallon...	4.00	Suits.....each...	*25.00
Tea.....per pound...	1.00 to 2.00	Towels.....do.....	*1.00
Tomatoes.....per dozen cans...	6.00	Undershirts.....do.....	2.00
Yeast.....per package...	.50	Vests.....do.....	5.00 to 6.00
Tobacco:			
Plug.....per pound...	2.00		
Smoking, cut.....do.....	2.50		

*And upwards.

NEW RAILROAD ZONE TARIFF OF PRUSSIA.

On October 1, 1897, Prussia introduced on all her railroads a new zone tariff, one of the main features of which is the granting of notable reductions on parcels going long distances. Opinion as to its utility for the interests of the general public is still divided. It is generally agreed that such a tariff is best suited for lines of goods used in localities distant from the places of production, such as coal, iron, fertilizers, etc. Such goods can not successfully pay high freight rates. But the opinion prevails in certain business circles that a general application of the zone tariff will not prove desirable, for the reason that the favorably located manufacturers or those who are able to take advantage of the cheap lands and low wages of certain remote districts will profit too much by this reduced tariff, and prove too strong for their unfortunate competitors, who in most cases will be the smaller manufacturers located in the industrial cities, where real estate and wages are high.

The old as well as the new reformed German freight tariffs were based on the principle that for equal parts of distance equal units of rate were to be charged. This system has existed in Germany since the introduction of her railroads. It is on this basis that her trade has found its markets. After a number of mining and agricultural products had been included in a special reduced tariff, it was principally due to the complaints of the textile trade of Silesia that a zone tariff was finally decided upon.

According to the proposition of the board of trade of Schweidnitz, there were to be no reductions for short distances; but for long distances the reductions were to be proportionate. According to the words of its defenders, such a tariff system would prove an excellent means of competition with other ways of transit—for instance, water ways. In reference to this matter there is, however, a divided opinion. Further, zone tariffs on German railroads have met with a very lively opposition, on the ground that they would assist foreign importation and competition by favoring long-distance transportation. The opposition was unable, however, to prevent the introduction of the new zone tariff, which in principle realizes the propositions made by the board of trade of Schweidnitz on December 2, 1896.

Up to the distance of 54 kilometers (33 miles), the present rate remains unchanged; thence to 204 kilometers (140 miles), a reduction takes place from 1 to 15 pfennigs (one-fifth of a cent to 3½ cents) per 100 kilograms (220.46 pounds) and from 205 to 304 kilometers

(190 miles) a reduction of 16 to 35 pfennigs ($3\frac{1}{2}$ to $8\frac{1}{2}$ cents) per 100 kilograms. There are still greater reductions for distances above 304 kilometers which amount to 1.55 marks (37 cents) at 600 kilometers (373 miles), and even 3.55 marks (84.5 cents) at 1,000 kilometers (621 miles), the latter being the greatest distance.

The zone tariff takes away an advantage from the small manufacturers of industrial districts, of which up to this time they were largely availing themselves, viz, the "Sammelladung Verkehr"—*i. e.*, the putting together of many small shipments to make up a carload, thus getting the same cheap rates as the large manufacturer who could make up a carload by himself. Goods shipped direct to principal cities or ports derived the full benefit; shipments which have to be reloaded did not realize the same advantage. Besides, delays have frequently occurred with such parcels, causing much complaint. This is one of the reasons given for abolishing the Sammelladung Verkehr; another is the low rates of the new zone tariff. The bulk of such shipments will be taken for direct transit. This will considerably lessen the combination or made-up carloads, and, inasmuch as the freight rates depend upon the number of cars used, the charges for such shipment will naturally increase. Furthermore, the expenses of the shippers chartering such cars will not grow less in the same ratio as the freight quantities will diminish; hence there will again be to some extent an increase in the cost of freight for the unit weight. As this blow will fall on the shoulders of the smaller merchants and manufacturers, a petition was sent in by Berlin merchants to the ministry to provide for measures which will allow of cheaper rates for collected shipments—*i. e.*, to allow the same rates for collected shipments after October 1 as had been in force up to that time. A similar proposal was made by the board of trade of Schweidnitz on December 2, 1896, when it proposed a rate for such collected shipments. There was still another appeal made by the Forwarders' Union of Berlin, asking for a progressive rate schedule, especially for collected carloads, as otherwise this branch of business would lose considerably by the decrease of traffic.

The secretary of railroads, however, declined to change the rates, basing his refusal as follows:

Even admitting that the shipping of collected carloads will suffer a decrease, especially at stations with little traffic, I can not share the fears as to the extent of its influence. The difference of rates between parcel freight and collected carloads is still great enough to encourage the use of the latter, so that a large decrease of such carloads is not likely to take place. Besides, it would not be in accordance with the idea of the new zone tariff, which is to give a uniform advantage of cheaper rates to everybody, especially to parties who could not or can not take advantage of carload rates. To grant special advantage to a limited number of parties, thereby annihilating the gains and aims of the new tariff, can not be considered, the more

so as these cheaper rates would mostly benefit the great trunk lines and large shippers. Hence, as long as we have no experience with the practical result of the zone tariff, I must decline to comply with your requests.

It is thus plain that the secretary wants to wait for practical proofs of the workings of the new tariff before going into the question of special rates. The shippers, however, who must reckon with the facts, are not willing to await the result of the experiment. They wish to make sure that the loss they will have to sustain will at least be partly covered. To make their business pay, they are obliged to work off part of the new expenses onto the shoulders of others. They have decided to charge an amount for storage and other expenses which, up to date, has been but a mere form—in proportion to the real expenditure for the same. The charges for drayage and storage have been the same for the last forty to fifty years, which shows at a glance that they did not represent the real expense. The amounts required for rent, wages, wagons, etc., have multiplied many times during the last half century, particularly in the great cities. So long as the difference between the freight for collected loads and single-parcel rates existed, the shippers were able to disregard these charges; but since the margin has been cut down in a way which predicts the winding up of many an account, the shippers can not but raise their charges proportionately. This will no doubt be the immediate consequence of the new zone tariff.

J. C. MONAGHAN,

CHEMNITZ, *October 22, 1898.*

Consul.

SUITING METHODS TO MARKETS.

Our manufacturers should keep constantly in mind the radical differences in the business methods of different countries, and avoid the mistake of assuming that they can extend their sales in one market in the same way that they acquire trade in another. I venture to say that the plan of selling American goods through middlemen, as is often done on the Continent, would not be successful in Scotland. This opinion has been arrived at after experience in making inquiries among business firms and companies, in response to requests from the London and Liverpool agents of American manufacturers and exporters. Almost invariably, I have been told by these firms that they prefer to deal directly with the American producer or exporter. They will not give orders to intermediate firms or companies. The exceptions to this rule are in special lines, such as bicycles, typewriters, electric motors, and other electrical machinery. It is my observation that large buyers of American wares and

the best class of small dealers who are progressive buy directly from the producer or his representative in America. They avoid any middleman who is anything more than an agent to take orders to be sent straight to the American manufacturer or exporter. Therefore, a warehouse for American goods here, managed by a company, would be useful only as a sample room. In this respect, undoubtedly, it would be of great benefit if the goods were well advertised.

Most of our manufacturers and exporters are pursuing the right course to secure the widest possible sale of suitable products in Scotland. Their policy is to reach the leading dealers in each important community without the intervention of middlemen. This plan is best adapted to business conditions here and, when supplemented by the usual methods of working up trade—by the personal efforts of a representative of the manufacturer wherever practicable—has been successful and will prove more effective than any other. It has brought splendid results in some branches of trade, and may be expected to continue to swell the sales of American goods.

RUFUS FLEMING,
Consul.

EDINBURGH, *November 18, 1898.*

VALUE OF PROMPTNESS IN CONSULAR REPORTS.

The *Frankfurter Zeitung* of November 12 calls editorial attention to certain defects of the German consular service, and gives some practical hints as to the kind of reform that is most needed. In the course of its criticism, it says:

A still more important question is whether the officials and consuls, with the same expenditure of money and energy, could not do much more for German business interests. We have already criticised our commercial statistics, but our consular reports appear to be in still greater need of reform. The manner in which these reports are made would be comical if it were not so aggravating. We have just received the last number of the German Commercial Archives, in which the Minister of the Interior publishes the consular reports. This volume was given out in October and contains the reports of our consuls from Sheffield, San Francisco, Penang, Sweden, Persia, etc. All these reports relate to the year 1897. A report from British India covers the period from April, 1896 to 1897. The only report for 1898 is one from Italy about the silk crop. These reports are certainly carefully prepared and contain a number of figures, but most of the facts are already old to those who are specially interested. They have been read in most cases in newspapers before they appeared in the reports of the officials who are specially sent to foreign lands to look after our interests. Of what use is it to the business man to know during the last days of the year 1898 what took place in distant countries during the years 1897 and 1896? During the time it takes the report to come to Germany to be revised and printed, the opportunity which it describes has been lost.

We can learn in this matter from the English, who publish their reports immediately in cheap editions; but still more from the Americans, who carry the consideration of business interests still farther. Americans would not publish in November, 1898, information relating only to 1897. The American does not wait until a report is "due," but makes it when an occasion occurs. These opportune reports, which are being adopted in England more and more, may be inferior to ours in scientific thoroughness and accuracy, but their practical value is twice as great. The Commercial Museum of Vienna gives some examples of the promptness of these reports. On the 10th of June a German vessel was plundered by pirates at Maracaibo. On the 20th of June the American consul sends a report about the equipment of a ship necessary to evade the pirates. The consul in Venezuela notices that there is an excellent opening for American coal at La Guayra and writes his report, exactly a page long, but containing all necessary information. Those interested receive prompt and exact information. Can not our officials do the same? Certainly they can do it, if they are informed as to the real needs of home industries; but it requires, of course, special training. The results obtained by the expenditure of time and money in our service fall so far short of being practically useful that it is necessary to call attention to conditions that should be changed, if possible. The right spirit and proper understanding are, of course, necessary.

DEAN B. MASON,

Vice and Deputy Consul-General.

FRANKFORT, *November 15, 1898.*

CHARITABLE WORK IN ODESSA.

I transmit a translation of a printed notice which has been delivered at every house in Odessa. It occurred to me that the idea is well worthy of the attention of the great public and private organizations devoted to relieving distress in the United States.

The scheme outlined in this appeal to the people of Odessa, while not new, is interesting and deserves to succeed. The articles collected are separated into a number of classes and sold, to be remanufactured into paper, glassware, iron, etc.

THOS. E. HEENAN,

Consul.

ODESSA, *November 2, 1898.*

The president of the Society for the Relief of the Odessa Poor, Countess A. J. Shuvalov, while endeavoring to find means for the wider development of the activity of that society, obtained the sanction for the establishment, in connection with the central committee of the society, of a section for the collection of contributions consisting of unnecessary articles.

In every family, unnecessary articles can be found which are frequently thrown out from the dwelling along with rubbish, and it is these entirely useless things which may serve as a new fund for the activity of the society. If every family in Odessa would only give during the year 1 ruble's worth of these unnecessary things, tens of thousands of rubles would accumulate in the treasury of

the society. Addressing such a request to all Odessa people, the society knows that it does not ask for sacrifices exceeding the donor's means. It only addresses to all the modest request, "Contribute all that you do not require." Do not be embarrassed either by the quality or the quantity of the offering. With most earnest gratitude, we accept all old rubbish, torn pieces of paper, clothing, foot gear, leather leggings, old newspapers, unnecessary books and music, old postage stamps, rags, linen, corks, pieces of iron, brass, and other metals, bottles, caps of bottles, broken glass, cut-off cigar ends, empty cigar and cigarette boxes, broken playthings, useless furniture, etc.

For the collection of these offerings of unnecessary articles, the section will send around collectors, dressed in uniform, with an open letter. In acknowledgment of such offerings, the collector will issue a proper receipt.

The collectors are not authorized to accept offerings in the shape of money.

INSANITY IN SWITZERLAND.

Out of a population of a little over 3,000,000, Switzerland is a record breaker as regards insanity. According to enumeration at the close of the year 1897, the inmates of the twenty State insane asylums of the Republic numbered 6,164, against 5,933 in 1896. The number of females predominated—3,262, against 2,902 males.

The commitments to the asylums during the year 1897 are recorded as follows: Males, 1,350; females, 1,050; total, 2,400. Released during the year, 1,247 males and 922 females; found not insane after commitment, 15.

The expenditure of the State for the keeping of each person is given as about 250 francs (\$48.25) per annum.

There are no laws for the commitment of insane persons. No judicial proceedings, such as a trial before a competent court or expert commission, are followed; but simply the written assertion of an ordinary physician, who need not be a specialist on insanity, that in his belief the person is insane, is deemed sufficient for the seizure and confinement of such an accused person in an asylum.

The following case will illustrate what can happen to an American citizen in Switzerland:

Julius Gerber, born in Switzerland in 1864, emigrated to the United States in 1879. In 1898, having saved enough money to gratify his desire of visiting his birthplace, he took passage from New York. Unfortunately, he was robbed of his savings on the steamer and arrived in Switzerland in a destitute condition. The Swiss law proclaims "Once a Swiss citizen, always a Swiss citizen," in spite of the fact of a native's prolonged absence in another country and of his swearing allegiance to and becoming a citizen thereof, thus making a peculiar duality of citizenship. The knowledge of this law of his native country induced Gerber to apply for admission to a labor

colony, a kind of public workhouse, in this city. The work he was put to was hard, while the food, so he told me, was entirely insufficient. His hope of getting back to the United States and his continuous harping thereon earned for him the name of a homesick melancholiac, and he was sent for mental examination to a hospital.

A physician, not an authority on insanity, gave a certificate declaring Gerber insane. While in the hospital and awaiting transportation to one of the insane asylums, Gerber escaped to the consulate and asked for protection as an American citizen. At my suggestion, he agreed to return to the hospital for further observation, where he was at liberty to go about as he pleased. In his conversations with me, no traces of insanity or hallucinations were discernible—simply a reiteration in a most natural manner of wanting to return to the United States, where he could get work to which he was accustomed.

After several interviews with the authorities, I proposed to pay half of his fare to the United States, provided they would pay the other half. This they at last agreed to do. The same physician who so willingly made out a certificate declaring Gerber insane was equally ready a week later to give me another pronouncing "the man's mental and physical condition such that, without danger to himself or others, he could travel in safety." Gerber left, cheerful and contented, on October 29, for the United States. By the expenditure of a small sum and a little time the man has been saved from a fate worse than death.

ADOLPH L. FRANKENTHAL,

BERNE, *October 31, 1898.*

Consul.

BRAZILIAN EXPORT TAX ON MONAZITE.

In compliance with a request for information from a resident of Baltimore, a Department instruction was sent on October 5, 1898, to the consular officers at Bahia and Santos, asking for reports on the export duty charged by Brazil on monazite. The answers (Advance Sheets of which have been sent the inquirer) are as follows:

Consul Furniss writes from Bahia, November 4, 1898:

As far as I can ascertain, all of the monazite sand found in Brazil is in the State of Bahia, near a little village called Prado, in the southern part of the State, on the coast.

At present, there is a discussion between the General Government and the State government as to the ownership of the lands where the sand occurs, the General Government basing its claim on the fact that, in accordance with law, it has a right to a strip along the coast

called "marinhas." This is a strip of 33 meters' width, measured from halfway between high and low tide. For this, the Government has granted the privilege for removal to an American, resident in Brazil. The Federal Government claims that all of this sand is found within the land over which it has jurisdiction.

The State claims that only a very little of this sand is found in the "marinhas," and has accordingly given a concession to a local company. Pending the settlement of the right of ownership, little sand is being removed.

The first cargo to be shipped for several months reached this port about two weeks ago and was sent to Germany. There was much discussion as to its value, but it was finally assessed on a basis of £20 (\$97.33) to the ton.

The State export duty on all sand is 24 per cent of its estimated worth, exclusive of whatever may be allowed as expenses of shipment, and the federal tax on the same sand is $2\frac{1}{2}$ per cent, calculated on the same valuation assessed by the State.

Thus this recent cargo contained 810,000 kilograms (1,785,726 pounds), and was valued at £25 per ton, with £5 deducted from valuation to cover duties and shipping expenses, making the duty in this instance 26 per cent on 550 reis paper (about 9 cents in United States currency) per kilogram of 2.2046 pounds.

The State export tax of 24 per cent includes the municipal tax of 2 per cent, and the sand shipped was taken out under the federal grant.

Vice-Consul Haugwitz, of Santos, under date of November 4, says:

All export duties in Brazil are levied by the State governments, and the tax on monazite sand in the State of São Paulo would be 9 per cent ad valorem, plus 10 per cent on the amount of duties resulting, besides one-half a reis per kilogram "expediente" for the municipality, plus an additional 10 per cent on this latter charge. One thousand reis are to-day equivalent to 17 cents. This export duty is invariable, while for certain other articles—as coffee, rubber, cheese, potatoes, etc.—the basis on which the duty is collected is officially revised and decreed every week.

NOTES.

Inventors' Bank in Austria: New Patent Law.—Consul-General Hurst writes from Vienna, under date of November 19:

The Austrian Government has granted, provisionally, a concession for an Austrian inventors' bank. In accordance with the statutes, the company's capital is to consist of 250,000 florins (\$100,000), paid down in shares of 200 florins (\$80) each. By a resolution of the board of directors, this amount can be raised eventually to 500,000 florins (\$200,000), and to 1,000,000 florins (\$400,000) on ratification by the Government and stockholders. The statutes designate the aim of the company to be the utilization of inventions and patents for the mutual benefit of the inventor and the bank, which may involve the erection of factories for the production of such patented articles, the founding and management of trade enterprises for the sale of these articles, and the right of the bank to carry on all other legally licensed businesses which are adapted to encourage the activity of inventors in Austria. The capital for this new enterprise has not yet been procured. The privilege has been granted for six months. By the end of this period, the company must be constituted and must have shown the subscription for the capital stock of 250,000 florins. If this elapses and the company has not been formed according to statute, the concession is withdrawn.

In his annual report (to appear in *Commercial Relations*, 1897-98) the consul-general notes that new patent laws have been inaugurated in Austria, providing for examination as to originality of the invention. The old law required the fulfillment of only a few formalities. Under the new law, three years are granted in which the patent may be worked, unless the interest of the State demands its working before the expiration of this period.

New Railroads in Russia and Switzerland.—Consular Agent Harris writes from Eibenstock, November 27, 1898:

Switzerland is at present putting forth remarkable efforts in the way of railroad construction. Work has begun on the great Simplon tunnel, and the first stretch of the daringly planned Jungfrau Railroad is completed. Work will also be hurried on the Rhätischen

Albulabahn. The most interesting of all, however, is the attempt now being made by an English company to secure a concession to build an electric wire-rope railway from Aosta, in Italy, over the great St. Bernard to Martigny, in the Rhone Valley. The cost, if undertaken, is estimated at \$2,895,000.

Russia is also making rapid strides. It is reported that the Czar has sanctioned the building of an electric railroad from Warsaw, via Lodz and Kalisz, to Skalmierzyce. From this point, connections will be made with Ostrowo, Krotoschin, and Lissa. From Lieradz and Storce a branch line will run to Wilhelmsbrück, Kempen, and Oels. The work should be so far completed that passenger traffic may be opened up in 1900. Another great undertaking of Russia has been completed. An important branch of the South Siberian Railroad, leading to the borders of Afghanistan, is now ready for business. On Sunday, November 20, the first trip was made. The road runs from Usun Ada, on the Caspian Sea, to Geöktepe, Aschabad, Merv, Tschardschui, and Buchara to Samarkand. Russia will be able to develop an enormous trade by means of this railroad. It is the key to Afghanistan, the borders of Persia, and, above all, the capital city of Herat and the great valley of Heri-Rud.

Steamship Service with Russia.—The chargé d'affaires at St. Petersburg, Mr. Peirce, writes, under date of November 23, 1898, in regard to the line of steamships established by the United Steamship Company, of Copenhagen, to run between Russian Baltic ports and America.* He incloses a letter from Consul Bornholdt, of Riga, to the effect that the *Georgios I* was dispatched from that port to Boston and New York on the 8th instant, as the first steamer of the new line. The second sailing is intended to take place about the end of November, if sufficient cargo can be obtained. Mr. Peirce adds that the company seems to be satisfied that they will find ample freight in the United States, and the difficulty will be to secure freights in Russia; failing this, the managers expect to make up cargoes from Sweden and Denmark. Mr. Peirce has suggested to them the shipment of Russian fancy marbles and of cement. The principal articles, he says, which formerly constituted the bulk of the export from Russia to the United States—namely, sheet iron, crash, bristles, hemp and flax, and leather—have greatly fallen off, owing, doubtless, to the production of these in the United States. The agent of the line, Mr. Schack, has informed Mr. Peirce that it is the intention of the managers of the new line to replace the vessels now in use by six

* See CONSULAR REPORTS No. 220 (January, 1899), p. 120.

new ships, of which they themselves will build three. They hope to find American capital for the others.

Vice and Deputy Consul Blom, of Copenhagen, under date of November 17, writes in regard to the departure of the *Georgios I* from that port. The new line, he says, takes freights on through bills of lading from all places in Russia to the United States, and vice versa.

Painters' Supplies in South Africa.—Consul-General Stowe, of Cape Town, under date of October 20, 1898, says:

The imports of painters' supplies and oils into South Africa during 1897 were as follows:

From—	Lard oil.	Linseed oil.	Other oils, unenumerated, not including paraffin.	Turpentine.	Varnish.	Paints and pigments.
	Gallons.	Gallons.	Gallons.			
United Kingdom.....	7,938	216,207	273,380	\$6,808.86	\$65,051.10	\$333,823.68
United States.....	107,424	2,300	270,653	23,132.54	9,418.68	20,911.64
Other countries.....	.....	5,549	98,195	116.64	646.38	4,194.18

I can not understand why turpentine, varnish, and paints from the United States have not had a larger sale in South Africa. The American paints are well liked, and the style of their packages, labels, etc., has been largely copied. The attention of the manufacturers of prepared or ready-mixed paints should be called to this market. The American preparations for calcimining in colors have the trade, and do not appear to be duplicated or imitated. These preparations are also known as colored distemper powders. In this connection, allow me to say that if sample packages with tint cards could be exhibited at the South African exposition, much trade, I believe, would follow.

Canadian Exports to and Exhibition in Cape Colony.—Consul-General Stowe writes from Cape Town, under date of November 7, 1898:

Canada is coming to the front as an exporter to South Africa, not only through foreign ports, but direct from New York, especially in cereals, timber, and products of the dairy. Canada has also been sending canned meats and fish, stoves, soaps, iron roofing, and many other products. While most of the exports have passed through the port of New York, on account of its proximity to her industries, yet a steamer is now on the way here from Quebec with full cargo. It

is claimed by Canadian exporters that the port of New York is much nearer to the manufacturing centers of the Dominion than to many similar centers of the United States, and consequently railroad freights are cheaper.

The establishment in Cape Town of what is hoped to be a permanent exhibit of Canadian products is worthy of commendation and emphasizes the advice given to our manufacturers. In this exhibition are found samples of household, office, school, and church furniture; hard-wood fittings, organs, pianos, bicycles, doors, sash, and frames; metal ceilings, lathings, and interior finishings; pressed brick, soap, crackers and biscuits, canned fruits and vegetables, woolen and cotton goods, cigars, split pease and rolled oats, belting, vehicles, wood-working machinery, flour-mill machinery, dairy outfits and products, etc.

Cotton Crop of Egypt.—The following, dated Cairo, November 10, 1898, has been received from Consul-General Harrison:

The high temperature in Egypt during October was favorable to the cotton plant and, to a certain extent, increased the yield. However, the fields that had already been seriously damaged by water and fogs did not profit by the heat.

The first picking is already finished and the second is under way. In general, a diminution from last year has been noted. As for the third picking, which suffered the most, it will be small. The yield in ginning is also slightly inferior to that of last year.

The past estimate of the crop, 6,000,000 cantars (588,300,000 pounds*), is likely to be confirmed.

So far as regards the quality, the staple of the first picking is better than that of last year; but, in consequence of the fogs, the appearance is not quite satisfactory.

Watches in Japan.—For the information of a Western watch company,† Consul Harris, of Nagasaki, under date of October 27, sends the following:

Though there used to be a large demand here for American watches, the business has now gone almost wholly into the hands of European houses. I see no reason why a firm effort on the part of our American manufacturers should not reclaim the greater part of it.

The average value of the watches imported from the United

* Assuming that the Government cantar of Alexandria (98.05 pounds) is meant.

† To whom Mr. Harris's letter has been forwarded.

States is about double that of the Swiss watches, which, in turn, are dearer than the German. It will be necessary, if we wish to regain the watch trade of Japan, to meet this low price, and that, I think, we can do, although I know that 5.95 yen (the equivalent of about \$3) is a very low c. i. f. price.

From January 1, 1899, the import duties will be:

Watehes, watch cases, and accessories:	Per cent.
Gold and platinum.....	30
Silver and all other.....	25
Watch movements and fittings.....	15

Swiss Opinion of American Libraries.—Consul-General Du-Bois sends the following from St. Gall, under date of November 25, 1898:

While the great Republic of the West is teaching many useful things to the Old World in the way of freedom, educational advancement, and commercial progress, its influence is being felt in other ways as well. Heretofore, we have been looked upon as a nation whose chief aim was making money, but now we are recognized as a potent element in the higher civilization. The press here contains frequent and intelligent articles concerning our public-school system, our colleges and universities, our hospitals, our asylums for the insane and the deaf and dumb, and for those dependent upon public and private charity for support. To these institutions are given the highest praise. Recently, much has been written about our public libraries. In a late number of the *Lausanne Bibliotheque Universelle et Revue Suisse* an article was published by Mr. Albert Schinz on libraries in the United States. He describes in an interesting manner the very astonishing increase of public libraries in our country, and says that not only does the United States publicly and privately contribute five times as much annually for public-library purposes as any other nation in the world, but it spends nearly as much annually for educational purposes as do England, France, and Germany combined.

British Steel Tubes in America.—Under date of November 15, 1898, Consul Halstead, of Birmingham, says:

In a report printed in *CONSULAR REPORTS* No. 217 (October, 1898), page 218, I stated that I had received from the United States an inquiry for the names of British manufacturers who made seamless steel tubes of 8 to 12 inch bore, and added it would be interesting to know whether we were dependent on foreign countries for

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ship tubes, as it was a matter which might have great importance in war times.

In a letter received this week, the merchants who made the inquiry say:

The fact is, we find ourselves dependent on England for this particular class of tube. We understand that owners of the English processes have sold certain rights for using machines that produce this tubing to people on this side; but at present no one is so equipped, though the manufacturers are making strenuous efforts to reach that point. These efforts will be largely governed by the demand. We have a demand here and are pushing the sale of the tubing on this side. We trust that in the near future we will not be dependent on our friends on the other side to make this material, but thank you just the same for your courtesy and interest on our behalf.

Opening for Rails in Victoria.—Consul-General Bray writes from Melbourne, October 25, 1898:

The following advertisement is appearing in the Government Gazette of this colony:

Monday, December 19.—Supply of steel rails and fish plates (three contracts). Particulars at the contractor's room, Spencer street, and at the office of the agent-general for Victoria, London. Preliminary deposit in each case, £750 (\$3,649).

The amount of steel rails and fish plates required by the railway commissioner of Victoria is 32,180 tons of the former and 3,258 tons of the latter. I am unable to furnish the particulars referred to in the advertisement, as there are certain fees to be paid before they can be obtained, and I am not authorized to incur any such expense.

Expansion of the Danish Merchant Marine.—Vice-Consul Blom writes from Copenhagen, November 10, 1898:

From January 1 to November 1, 1898, the Danish merchant steam fleet has been increased—partly by steamers newly built in Denmark and abroad, partly by purchase of steamers abroad—by 45 steamships, with a gross tonnage of about 77,000, or a net registered tonnage of about 48,000. A further addition of 4 steamers, aggregating 2,000 registered tons net, is expected during the last two months of the year, making a total increase for 1898 of 49 steamers with 50,000 registered tons net. It can not be stated accurately how much of this increase is intended for the Danish-American steamship service, but it is known that nearly half of the increase in 1898 was placed on the steamship routes from Denmark to the United States.

The decrease in the Danish merchant steam fleet during the same period was 17 steamers of 7,000 tons net; but none of them were on the American lines. The indications are that the Danish-American tonnage will increase still more during the coming year.

Danish Complaints of American Corn.—Vice-Consul Blom writes from Copenhagen, November 14, 1898:

Serious complaints have again been made against the American inspection of American indian corn for foreign shipment, and, from the investigations I have personally made, I consider the complaints well founded. July and August shipments were not satisfactory. Three of these, coming from houses in Baltimore, Philadelphia, and New York on the steamships *Kirkby*, *Sidia*, and *Leconfield*, respectively, were especially bad. It seems incredible that the corn discharged from those steamers could be passed by the inspectors as corn No. 2, sail grade, as it was full of dust, dirt, and sand, which averaged from 3 to 5 per cent. To say nothing of this great loss in weight, it is reasonable to believe that all this dirt has a very bad effect on the sound corn, which, on this account, easily becomes damaged before it arrives at its destination.

Denmark is an enormous market for American corn, and, as the evil can no doubt be remedied, I wish to call attention to the above-named facts.

New Industries in Saxony.—Consul Winter writes from Anna-berg, November 15, 1898:

During the past twelve months, thirty-five new stock companies have been organized in the Kingdom of Saxony, with an aggregate capital of \$12,500,000.

The total number of joint-stock companies now in operation in this Kingdom is four hundred and two, with ten branch establishments in other parts of Germany.

Among the newly organized firms are three textile companies with a capital of \$900,000, five electro-technical factories with a capital of over \$2,000,000, three machine and metal manufactories with a capital of \$550,000, three chemical factories with a capital of \$650,000, four mining companies with a capital of \$900,000, two banking companies with a capital of \$4,500,000, one brewery with a capital of \$450,000, one real-estate company with an organized capital of \$475,000, one paper manufactory with a capital of \$135,000, two transportation companies with a capital of \$275,000, one hotel company with a capital of \$125,000, and others engaged in the manufacture of furniture and various lines of industries.

Demand for Manures in Ireland.—Consul Wilbour, of Dublin, under date of December 9, 1898, says:

Inquiry has recently been made at this office for the addresses of American houses handling superphosphates, guanos, basic slag, bone manures, and other chemical fertilizers. The persons in question

wish to deal directly with the American manufacturers and want especially to know the price of goods per 100 and per 1,000 tons free on board at such Irish ports as Ballina, Galway, Sligo, and Westport, all of which are on the western coast of Ireland. The manures must be of the best quality and the prices such as to induce buyers of these goods to purchase. The percentages of phosphates, etc., should be given, and the origin of the phosphates should also be stated. If those of our manufacturers who desire to cultivate this branch of export trade will send this office prices of their goods free on board at the ports mentioned, I will have them brought to the notice of inquirers.

Wooden Boxes for Coal in England.—Under date of November 28, 1898, Consul Halstead, of Birmingham, writes:

The metal coal scuttle found in American homes, painted, japanned, enameled, in many styles and shapes, is not used in England. In its stead, there is used an ornamental hard-wood box, made of any one of the different kinds of wood, furnished with a solid stationary brass carrying handle, and a drop lid which conceals a galvanized-iron coal box, which slips in and out of the box easily. It is really an attractive piece of furniture for a room, and to my mind is better than the metal coal scuttle. While this box may be used in some parts of the United States, at this moment I am not able to recollect a single house which has one. I believe our hard-wood manufacturers, because of convenient supplies, could not only develop an export trade with these boxes, but would find a ready sale for them in the United States.

Duties in Siberia.—The chargé d'affaires at St. Petersburg, Mr. Peirce, writes under date of December 13, 1898, that a report appears to be current that duties are to be exacted at an early date upon merchandise coming into Vladivostock and other Siberian ports on the Pacific coast from foreign countries. An American citizen who is doing a large business in Siberia, chiefly in American goods, who has eleven warehouses in different parts of the country east of Irkutsk, has written to the embassy at St. Petersburg to inquire into the matter. Mr. Peirce says that he has asked for information on the question from the Imperial Minister of Finance and has been assured that, while it is the intention of the Russian Government to levy duties upon importations into Siberia through Pacific ports at some future time, importers can feel easy as to any such action being taken at an early date. The matter is one of years, not of months, and due notice will be given before any such regulation goes into effect.

Peruvian Duties on Rice, Lard, and Petroleum.—Minister Dudley writes from Lima, under date of November 14, 1898, that, according to a law promulgated on November 11, the duties on certain articles are fixed as follows: Shelled rice, $2\frac{1}{2}$ centavos (1.09 cents*) per kilogram (2.2046 pounds); and unshelled, $1\frac{1}{2}$ centavos (0.65 cent); lard, 3 centavos (1.29 cents) per kilogram, gross weight; crude petroleum, £1 (\$4.8665) for every 20 metric tons (44,092 pounds).

The duties on rice and petroleum go into effect January 1, 1899; on lard, on June 1, 1899. The decrease in the duty on rice, notes Mr. Dudley, is slight; but on lard, the present rate is 15 centavos per kilogram, and the existing duty on petroleum is about £6 a metric ton.

Venezuelan Customs Classification.—Consul Plumacher transmits from Maracaibo, December 3, 1898, translation of a decision of the treasury department of Venezuela, as follows:

In order to avoid difficulties and controversies at the custom-houses of the Republic in the dispatch and classification of colored cotton goods manufactured with colored threads, or with white and colored threads, plain or striped lines, etc. (fancy or not), which are in many cases considered by the examiners as mixed "colored cotton and linen goods" belonging to the sixth class, when they are sent as ordinary colored prints which pertain to the fifth class, therefore making them subject to confiscation according to law, the President of the Republic has decided: That when said cotton goods imported contain only thirteen threads in a square of 5 millimeters they should be considered as ordinary cotton prints belonging to the fifth class; and when the same square of 5 millimeters contains more than thirteen rows of thread, they shall be considered as mixed cotton and linen goods of the sixth class.

Importers of ordinary cotton prints are obliged to specify in their consular declaration that said prints do not contain over thirteen rows of thread, in warp or woof, to the square of 5 millimeters.

Noncompliance to this formality will be sufficient to classify the goods as belonging to the sixth class from the 1st of January next.

Shipping of British Columbia.—Commercial Agent Shotts sends from Sault Ste. Marie, under date of October 26, 1898, a clipping from the Toronto Daily Mail, in which an interview was given with the president of the Canadian Pacific Railway, who had just returned from Vancouver. The magnitude of the ocean trade which has been built up on the Canadian-Pacific coast, says the president, is not generally recognized. The day on which he was in Vancouver

* Taking the value of the Peruvian sol, as estimated by the United States Director of the Mint, October 1, 1898, at 43.6 cents.

ships were loading in the port (not including coasting trade) as follows:

Steamships—*Ragnor*, for Niuchwang; *Empress of India*, for China and Japan.

Barques—*Sem:nola*, for Adelaide; *Santa Rosa*, for Guayaquil; *Rosc*, for Freemantle; *Empire*, for Sidney; steamship *Athenian*, for Vladivostock; ship *Bendiceon*, for Sydney; ship *Pentheula*, for Cape Town; ship *Kennebec*, for South Africa; steamship *Warrimoo*, for Auckland and Sydney; barque *Eliza*, for China; schooner *John D. Talbot*, for Australia; steamship *Tartar*, for China and Japan.

Demand for Guns in Russia.—The following, dated St. Petersburg, November 24, 1898, has been received from Consul-General Holloway:

I am informed that the Russian Government recently contracted a loan of 108,000,000 rubles (\$55,512,000) in France, to be used in replacing her artillery with rapid-firing small-caliber guns. The trials by experts have been concluded, and the report is said to be in favor of the manufacture of a gun embracing the best points of a number tested. As 6,000 guns will be required within the next two years, and Russia will not be able to manufacture that number, contracts will be made with foreign firms to furnish the remainder.

Demand for American Mantels in England.—Consul Halstead writes from Birmingham, November 22, 1898:

A firm of merchants in Birmingham wishes to be put in communication with manufacturers making wooden mantels and over mantels, which technical term means, I understand, looking-glass, shelves, and recesses combined in the mantel frame. The firm would prefer to buy these mantels through a London house, because they do not wish to stock them.

I should be glad to hear from any manufacturer with a London connection.

Inquiry for Mild Plating Steel in England.—Consul Halstead writes from Birmingham, November 30, 1898:

A large firm of edge-tool manufacturers in this city, its line consisting of spades, shovels, forks, axes, adzes, hatchets, picks, trowels, hoes, etc., requests me to obtain for them the names of a few makers of steel suitable for its use. The manufacturers say: "Of course there are numerous varieties used, but our largest purchases are of mild plating steel in bars, sizes running between 2 inches by one-half inch to 4 inches by 1 inch."

Opening for Iron and Steel and Barber Chairs in France.—

Consul Jackson, of La Rochelle, under date of December 15, 1898, says that he has had several inquiries of late as to the prices of American iron and steel. Two parties have inquired the prices of bar iron of different weights, etc. There have also been inquiries as to steel rails, as many tramways are being laid down both in his district and the adjoining departments of France. If he had samples and prices, Mr. Jackson thinks that sales might be effected. He also reports an opening for American barber chairs. Correspondence concerning the latter commodity should be addressed to Monsieur F. Thomas, rue du Temple, La Rochelle.

Reduction in French Freight Charges.—Under date of November 26, 1898, Commercial Agent Atwell, of Roubaix, says that railway companies in France have submitted for ministerial approval certain modifications in the law governing rates of transport, which went into effect October 10, 1898. The following companies took part: The Paris, Lyons, and Mediterranean, the Northern, the Eastern, the Paris and Orleans, the Southern, the Western, and the Belt. The proposed modifications have particular reference to the wool and cotton industry, as affecting both the raw material and manufactured goods, and are in the line of reduction, as it is recognized that the freight charges must be less onerous in order to allow the merchants and manufacturers of France to compete with rival countries.

Cattle Disease in Belgium and France.—Consul Roosevelt, of Brussels, writes, under date of November 22, 1898:

The cattle disease called aphthous stomatitis (inflammation of the mouth) is again epidemic in Belgium. Fifty-two communes and one hundred and fifty-two stables are affected in the department of Hainaut. The outbreak is considered so serious that the governor of the province has peremptorily prohibited the holding of cattle markets in Charleroi, Thuin, and throughout the basin of the Center until further notice.

Commercial Agent Atwell writes from Roubaix, November 12, 1898, that a disease affecting the throat and mouth of cattle has declared itself within the last week in that vicinity. The usual precautions as to disinfection have been taken, and it is not thought that the disease will spread.

Manchester Exports to Cuba, Puerto Rico, and the Philippines.—Consul Grinnell writes from Manchester, under date of December 1, 1898, that the total exports from that district to Puerto Rico, the Philippine Islands, and Cuba during the first quarter (September, October, and November, 1898) of their possession by the United States were:

To—	Amount.	
Puerto Rico.....	£16,395	\$89,786
Santiago de Cuba	3,821	18,594
Manila, Philippine Islands	12,286	59,789
Total	32,502	168,169

Proposed Railway in Northern Mexico.—Consul Griffith writes from Matamoros, December 16, 1898:

The fact that a company under the name of the Chicago, St. Louis, and Texas Air Line Railway Company has been chartered to build a road from San Antonio to Brownsville, Tex., and the entire route surveyed, has caused interested comment among men prominent in business and financial circles in Matamoros and northeastern Mexico. The commencement of this road will undoubtedly result in the building of a road from Matamoros to Mexico City. It seems strange that a road has not already been constructed, not only because it would traverse a country of the most varied resources—agricultural, grazing, and mining—but it would be by from 400 to 600 miles the shortest route from Mexico City to the large manufacturing cities in the central and eastern part of the United States.

New Steamship Service to Venezuela.—Mr. Russell, secretary of the legation at Caracas, writes under date of December 17, 1898, that the Hamburg-American Steamship Company has just established a new service to Venezuela. Two ships have been constructed for this service, and they will make monthly trips, beginning February 15, 1899. The itinerary is as follows: Hamburg, Havre, Barbadoes, Trinidad, Ciudad Bolivar, Carupano, Curnana, Guanta, and Maracaibo. The boats are specially constructed for the Maracaibo and Ciudad Bolivar trade. They have 1,237 tons displacement, 500 horsepower, speed of 9 knots, carrying capacity of 1,800 tons; draft, 9 feet with 600 tons of cargo and 11 feet with 950 tons; water-ballast tank, 374 tons capacity.

Nicaraguan Tariff Change.—The United States minister to Costa Rica, Mr. William Lawrence Merry, writes from San José, under date of December 18, 1898, that he has received information that the Government of Nicaragua issued a decree on November 22 annulling the tariff law of September, 1898,* and substituting therefor the previous tariff.

New Tariff of Ecuador.—Minister Sampson sends from Quito, under date of December 1, 1898, copy of a law passed by the Ecuadorian Congress and just published, translation of which reads:

ARTICLE 1. Machines and machinery intended for the encouragement of agriculture and manufactures will be released from the payment of all import duties.

ART. 2. In like manner, no import duties on cotton, ginned or unginned, will be exacted for the term of two years from the promulgation of this decree.

Duty on Cigars in Dutch West Indies.—Under date of December 2, 1898, Consul Smith, of Curaçao, writes that the Government has increased the import duty on cigars and cigarettes to 10 per cent ad valorem, the increase taking effect November 18, 1898.

Import of Explosives Prohibited by China.—The following has been received from Consul-General Goodnow, dated Shanghai, November 12, 1898:

I am requested by His Excellency Tsai, taotai of Shanghai, as instructed by the Tsungli Yamên, through Viceroy Lin, to notify our merchants that dynamite and such explosives will not be allowed to be landed in China.

Composition of Shellac and Asbestos.—Consul Kehl, of Stettin, writes, October 10, 1898:

A new composition, the principal ingredients of which are shellac and asbestos, has been discovered in Germany, and application for patent has been made. The advantages claimed for it are cheapness of raw material and hardness and lightness of weight. It is fireproof and can be handled about as readily as wood.

* See CONSULAR REPORTS No. 219 (December, 1898), p. 596.

Danish Department of Commerce.—Vice and Deputy Consul Blom writes from Copenhagen, November 30, 1898:

The Danish merchants have for some years petitioned the Government for a special department of commerce, but without success. It appears, however, that the Government is now willing to grant the request, as the Minister of the Interior yesterday introduced a bill to that effect into the Danish Diet, and it is likely to become law.

Stucco Retarders in France.—For the information of a United States Senator, to whom a copy of the letter has been sent, Consul-General Gowdy writes from Paris, November 8, 1898:

Stucco retarders are principally made of water and glue. The glue used chiefly in France is that of "Givet," turned out in tablets or cakes. The dimensions of these tablets are 7.087 inches (18 centimeters) in length, 5.906 inches (15 centimeters) in width, 0.236 inch (6 millimeters) in thickness. The weight is 7.0877 ounces (200 grams).

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
E. Schneegans, Saigon.....	Nov. 8, 1898	Rice market.....	Department of Agriculture.
Do	Oct. 26, 1898	.....do	Do.
G. F. Lincoln, Antwerp.....	Dec. 5, 1898	Agricultural food products..	Do.
C. W. Erdman, Breslau.....	Dec. 3, 1898	Production of sugar in Germany.	Do.
Do .....	.....do	Grain and fruit in Germany..	Do.
J. H. Grout, jr., Malta.....	Dec. 6, 1898	Failure of Maltese potato crop.	Do.

FOREIGN REPORTS AND PUBLICATIONS.

German Steamship Service to Asia and Australia.—According to a British Foreign Office report, the German Government has entered into a contract with the North German Lloyd Company for the maintenance of postal communication with eastern Asia and Australia. The Lloyd Company, for the space of fifteen years, undertakes the following services:

In traffic with eastern Asia—

(1) A main line from Bremerhaven or Hamburg to China via a Belgian or a Dutch port, through Genoa, Naples, Port Said, Suez, Aden, Colombo, Singapore, and Hongkong to Shanghai, and back by the same route.

(2) A main line from Bremerhaven or Hamburg via a Belgian or a Dutch port to Japan, through Genoa, Naples, Port Said, Suez, Aden, Colombo, Singapore, and Hongkong to Yokohama, and back by Hiogo, Nagasaki, Hongkong, etc., same ports as on outward voyage.

(3) A branch line to No. 2 from Hongkong to Shanghai and back.

(4) A branch line from Singapore to German New Guinea and back via Batavia and other harbors of the Sunda Archipelago.

For the Australian traffic, a main line is to be established from Bremerhaven to the mainland of Australia via a Belgian or Dutch port, through Genoa, Naples, Port Said, Suez, Aden, Colombo, Adelaide, and Melbourne to Sidney, and back by the same ports.

Four steamers are to be built for the Asiatic service, to be of not less than 6,000 tons for the main lines; those for the Australian lines must be not less than 5,300 tons. The ships must be built in German yards and of German materials. Only German coal and provisions must be bought, and the Chancellor can prohibit the importation by German, Belgian, or Dutch ports of agricultural products that may compete with those of German agriculture. When German and foreign goods are offered simultaneously for dispatch, the German goods shall have the preference. Sailings on the Japanese line must begin by April, 1899. The Government pays the company £279,500 (\$1,360,187) per year, in monthly installments.

In connection with this contract, the Board of Trade Journal (London, December, 1898) notes that a Bremen firm intends shortly

to start a steamer company on the Yangtze Kiang, in China, to run from Shanghai to Hankau. Two boats are now being built for this service. As by the contract above quoted a branch line of the Lloyd company is to run regularly to Shanghai, there will soon be direct communication by German steamers from Hamburg to Hankau, which will be of enormous importance in developing the German export trade to China.

Mineral Deposit in Mexico.—The South American Journal, London, December 17, 1898, says that a most interesting discovery of ore has been made 5 miles from Chihuahua. The character and appearance of the deposit would not ordinarily invite any miner or prospector to give it a second thought, as it does not indicate any mineral ore. A recent assay has resulted in 15 ounces of silver and half an ounce of gold to the ton. The extent and quality of the ore lying below the surface is yet unknown, but the discoverers have been quarrying the ore in the same manner as rock is quarried from a bank. One hundred and fifty tons are being taken out daily and shipped by rail to El Paso for smelting. It nets the owners \$15 Mexican per ton. From the appearance of the deposit on the surface, it is thought that many thousands of tons can be immediately extracted. The ore body is said to seem inexhaustible. The miners have penetrated it nearly 50 feet, and still have not reached the end. A shaft sunk some 120 feet developed the fact that this deposit lies nearly horizontal, under a bed of lime and conglomerated volcanic matter, and pitches with a slight angle toward the main valley. It is believed that the combination of silica, lime, manganese, and iron would indicate that the material was once held in solution, precipitated and deposited as it is found to-day. It is black as coal to the eye and covers many acres. The ore is low grade; but, since it can be extracted very cheaply, the immense quantity in sight is sure to prove remunerative. Claims and denouncements of property have been made for half a mile around the spot. The owners of the mine, it is said, intend to build a railway to connect with the Central Railroad, about 2 miles from Chihuahua. Only 3 miles of railroad will have to be built.

Commerce of the Gold Coast.—The Consular Journal and Greater Britain, London, December 1, 1898, quotes the following from a report of the acting colonial secretary:

There has been an increase of the trade of the colony during 1897, though the country beyond Ashanti has been in anything but a settled state. The total value of imports in 1897 was £784,188 (\$3,816,251) and the exports £857,793 (\$4,174,450).

The increase in the total trade over 1896 was £71,861 (\$349,512). The principal articles of import are cotton, woolen, and silk goods; spirits, hardware, rice, flour, provisions, tobacco, building materials, and wearing apparel. The exports comprise palm oil, palm kernels, rubber, gold dust, timber, coffee; cocoa, monkey skins, and kola nuts.

The following comparative table shows that the greater proportion of the trade is with the United Kingdom:

Countries.	Imports in 1897.		Exports in 1897.	
United Kingdom.....	£526,411	\$2,561,779	£581,904	\$2,831,836
British colonies.....	60,787	295,820	35,667	173,573
Foreign countries.....	196,990	958,652	240,222	1,169,040

The resources of the colony are considerable, though their development is much retarded by the lack of proper means of transport and an unhealthy climate. The cultivation of coffee and cocoa is on the increase, though coffee cultivation is handicapped by an insufficiency of water. The gold-mining industry is carried on chiefly in the western district. Three or four companies are doing steady work. The gold reefs of the mining district have been declared by experts to be similar to those of Johannesburg. The industry has been hampered by the difficulty of transporting the necessary machinery from the coast to the mines; but the Government is constructing a railway from the coast to the mining districts in the neighborhood of Tarquah, and, when this is completed, it is confidently anticipated that the gold industry will receive an impetus which will result in the development of existing mines and the opening of new ones.

Public works have been taken vigorously in hand. Roads are to be constructed from the chief coast centers to the interior. The following have been undertaken: From Accra to the Akin district, 25 miles; from Tinkranku to Kpong, 190 miles (work started in July; 25 miles completed up to December 31, 1897); from Axim to River Ankobra, 3 miles (work almost completed); from Bonsa to Tarkwa, 12 miles (2 miles completed); from Danoe to Dogplata, 23 miles (work completed). Two railways commenced in 1896 were completed in 1897—from Accra to Kumassi via In-suaim, and from Takoradi Bay to Tarquah. Arrangements have been made for the construction of a line from Sekondi to Tarquah. This will go through the mining and timber districts, and work was commenced early in 1898.

Trade of Orange Free State.—The Board of Trade Journal, London, December, 1898, says that, according to statistics quoted by the Castle Mail Packet Company, the trade of the Orange Free State in 1897 was: Imports, £1,231,699 (\$5,994,063); exports, £2,235,206 (\$10,877,630). Diamonds figured for £440,964 (\$2,145,951) in the exports. There was an increase in both imports and exports over 1896. The chief destination of the merchandise of the Orange Free State is the Transvaal, the value of goods exported thither having been £871,738 (\$4,242,313) in 1897. The trade last year was greatly interfered with by the rinderpest and drought. The export of wool, hides, cattle, etc., increased; but there was a notable falling off in the value of ordinary agricultural produce.

Trade of French Kongo.—The Board of Trade Journal, London, December, 1898, gives the following statement of the trade of French Kongo in 1896 (the latest year for which official returns are available):

Countries.	Imports.		Exports.	
France and French colonies.....	£60,077	\$292,365	£23,335	\$113,560
United Kingdom.....	71,795	349,390	76,406	371,830
Germany.....	32,025	155,850	24,845	120,908
Kongo Free State.....			29,025	141,250
Other countries.....	27,967	136,101	29,175	141,080
Total.....	191,864	933,706	182,786	889,528

These figures are exclusive of reexports of imported goods to the value of £7,050 (\$34,309), principally to France and the Kongo Free State.

Commerce in the Transvaal.—The Consular Journal and Greater Britain, London, December 1, 1898, has the following extracts from a report by the British vice-consul at Johannesburg:

The import of railway material in 1897 figures at £869,443 (\$4,231,144), an increase of £237,504 (\$1,155,813) over the previous year. Machinery was in 1897 as in 1896, the largest item in the imports, figuring in the former year at £1,876,391 (\$9,131,457). There is a large decrease in this line, however, owing to the fact that the demand for machinery is shrinking on account of the almost entire cessation of the development and equipment of fresh mining properties. The mines that are working are fully equipped, and the current year will probably show a further decrease.

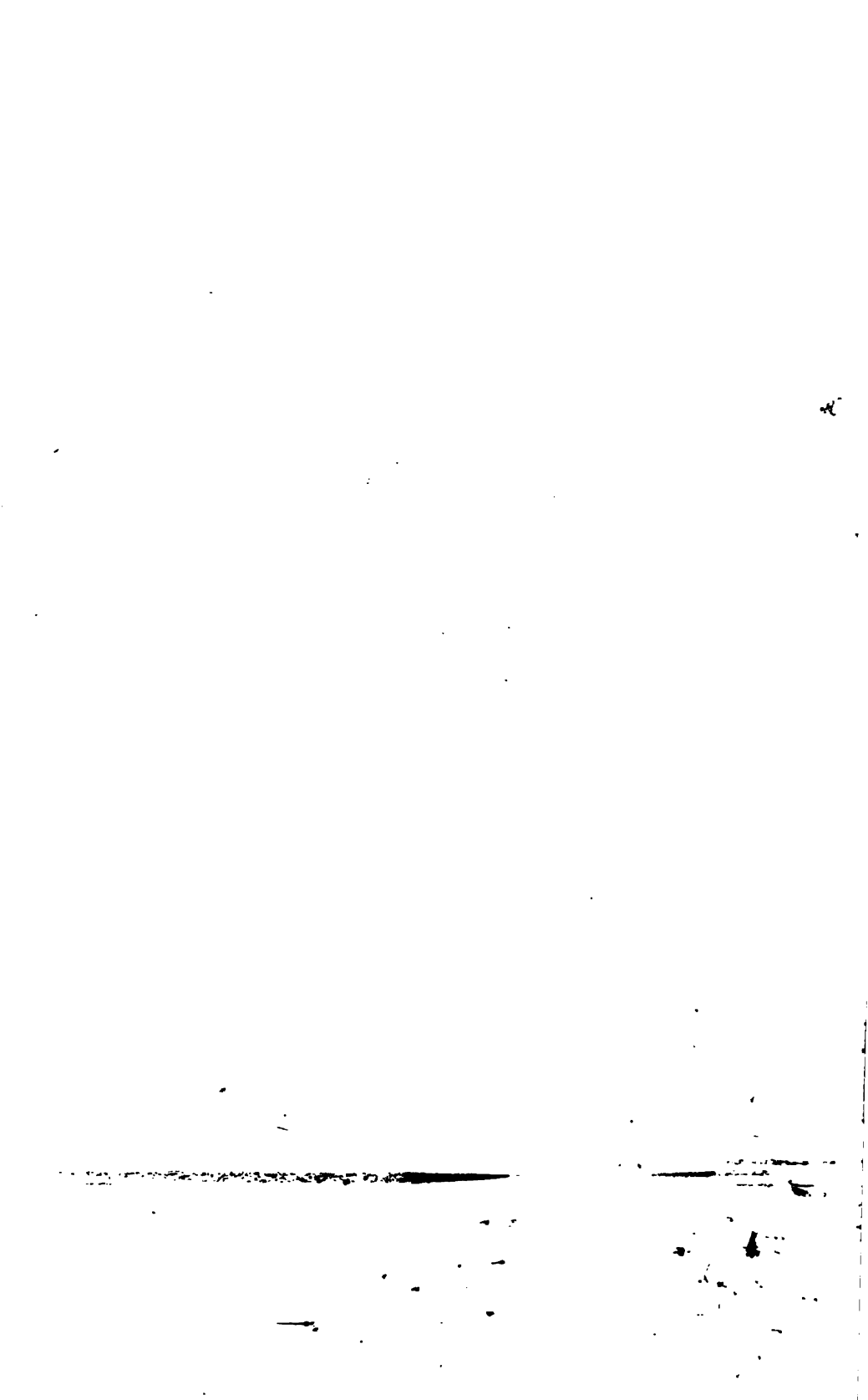
The import of beer in 1897 was £47,108 (\$229,251); there has been no material fluctuation in this item since 1895. The bulk of the beer imported comes from Germany, Sweden, and the United States. There are several local breweries, with a good and cheap product. The importation of liquors has increased during the last three years, amounting in 1897 to £239,900 (\$1,167,473); over-sea imports in this line are chiefly from Great Britain.

The leather ware imported in 1897 was valued at £462,391 (\$2,250,226), showing a decrease of 2.9 per cent from 1896. Boots and shoes are the largest items in this class, and they are mostly of British manufacture. Furniture was valued in 1897 at £317,636 (\$1,545,776), or a decrease from the preceding year of 12 per cent. The figures for 1896 were large, showing the prosperity enjoyed by the State during that year; but house furnishing is now at a standstill, and a large reduction in this article of import may be expected during the current year. The United Kingdom, Germany, Austria, and the United States are competitors in this line.

The importation of butter (including butterine, ghee, and margarin) was £158,867 (\$773,123). Imports in this line have steadily increased, and, on account of the ravages of the rinderpest, there now exists a good market in South Africa for this article. Provisions and groceries include condensed milk to the value of £33,322 (\$162,162) in 1897. Woolen blankets were valued at £164,044 (\$798,320). The Transvaal affords a good market for ready-made clothing, as, excepting the higher class Europeans, the community generally, including the Boers, seem to prefer this kind of garment. The natives are also extensive purchasers.

The vice-consul notes that German trade decreased in 1897 from 1896. The trade of the United Kingdom with South Africa is increasing year by year, but the United States is making still greater progress. He speaks especially of the excellence of American packing, and says that in some lines British goods are being displaced by American; for instance, household pumps, edge tools (including saws), shovels, picks, lawn mowers, and carriages.

Trade of Fiji.—According to statistics published by the British Board of Trade Journal, London, December, 1898, imports into Fiji in 1897 were valued at £248,748 (\$1,210,532) and exports at £431,860 (\$2,101,646), sugar representing £323,830 (\$1,575,919) of the exports. Over 90 per cent of the total trade of the colony was transacted with New South Wales, New Zealand, and Victoria. Many of the importations, however, are of German origin, and there has been an increase in prints, glassware, sewing machines, and enameled ware.



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Full directions for binding the Consular Reports are given in No. 131, page 663.

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston makes the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to \$20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to January 1, 1899, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account that the ruble of Russia, for instance, fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891-95 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic*	Gold and silver..	Peso.....	\$0.96,5	Gold—Argentine (\$4.82,4) and ½ Argentine; silver—peso and divisions.
Austria-Hungary†	Gold	Crown.....	.20,3	Gold—20 crowns (\$4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do .....	.....do	1.00	
Chile.....	.....do	Peso.....	.36,5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.
Cuba	Gold and silver..	.....do .....	.92,6	Gold—doubloon (\$5.01,7); silver—peso (50 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	.....do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	.....do	Mark.....	.19,3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling...	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti .....	.....do	Gourde.....	.96,5	Silver—gourde.
Italy.....	.....do	Lira.....	.19,3	Gold—5, 10, 20, 50, and 100 lire silver—5 lire.
Japan ‡	Gold	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia .....	.....do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin .....	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—\$2 (\$2.02,7).
Portugal.....	.....do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia †.....	.....do	Ruble.....	.51,5	Gold—imperial (\$7.718) and ½ imperial (\$3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Gold	Peso.....	1.03,4	Gold—peso: silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed.

† The gold standard was adopted October 1, 1892. (See CONSULAR REPORTS No. 147, p. 623.) Values are still, however, frequently expressed in the florin or gulden, which is worth 2 crowns or 40.6 cents.

‡ Gold standard adopted October 1, 1897. (See CONSULAR REPORTS No. 201, p. 259.)

§ See note to table of fluctuating currencies.

For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—Countries with fluctuating currencies, 1874–1890.

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*	Silver.....	Florin.....	\$0.47,6	\$0.45,3	\$0.45,3	\$0.41,3	\$0.40,1	\$0.39,8
Bolivia.....	do.....	Dollar until 1890; bolivi- ano there- after.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America.....	do.....	Peso.....	.96,5	.91,8	.91,8	.83,6	.....	.....
China.....	Silver.....	Haikwan tael.....	1.61	1.61	.....	.....	.....	.....
Colombia.....	do.....	Peso.....	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador.....	do.....	do.....	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†.....	Gold.....	Pound (100 piasters).	.....	.....	4.97,4	4.97,4	4.90	4.90
India.....	Silver.....	Rupee.....	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan.....	Gold.....	Yen.....	.99,7	.99,7	.99,7	.99,7	.....	.....
	Silver.....		.....	.....	.....	.....	.87,6	.86,9
Mexico.....	do.....	Dollar.....	1.04,7½	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands‡.....	Gold and Silver.	Florin.....	.40,5	.38,5	.38,5	.40,2	.....	.....
Peru.....	Silver.....	Sol.....	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia.....	do.....	Ruble.....	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli.....	do.....	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*	Silver.....	Florin.....	\$0.39,3	\$0.37,1	\$0.35,9	\$0.34,5	\$0.33,6	\$0.42
Bolivia.....	do.....	Dollar until 1880; bolivi- ano there- after.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America.....	do.....	Peso.....	.....	.....	.....	.69,9	.68	.85
Colombia.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†.....	Gold.....	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India.....	Silver.....	Rupee.....	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan.....	Gold.....	Yen.....	.....	.....	.99,7	.99,7	.99,7	.99,7
	Silver.....		.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico.....	do.....	Dollar.....	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru.....	Silver.....	Sol.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia.....	do.....	Ruble.....	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli.....	do.....	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at \$4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—Quarterly valuations of fluctuating currencies.

Countries.	Monetary unit.	1896.				1897.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.....	\$0.49,1	\$0.49,3	\$0.49,7	\$0.49	\$0.47,4	\$0.46,8	\$0.44,3	\$0.41,2
Central Amer- ica.	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,5	.44,3	.41,2
China.....	Amoy tael.....				.79,3	.76,7	.75,7	.71,7	.66,4
	Canton tael.....				.79	.76,5	.75,5	.71,5	.66,4
	Chefoo tael.....	.75,9	.76,3	.76,9	.75,8	.73,3	.72,4	.68,6	.63,7
	Chinkiang tael.....				.77,4	.74,9	.73,9	.70	.65,1
	Fuchau tael.....				.73,3	.70,9	.70	.66,3	.61,6
	Haikwan tael....	.80,8	.81,2	.81,9	.80,6	.78	.77	.73,1	.67,8
	Hankau tael.....				.74,2	.71,7	.70,8	.67,1	.62,3
	Ningpo tael.....				.76,2	.73,7	.72,8	.68,9	.64
	Niuchwang tael.....				.74,3	.71,9	.71	.67,2	.62,5
	Shanghai tael....	.72,5	.72,9	.73,5	.72,4	.70	.69,1	.65,5	.60,8
	Swatow tael.....				.73,2	.70,8	.69,9	.66,2	.61,5
	Takao tael.....				.79,8	.77,2	.76,2	.72,2	.67
	Tientsin tael.....	.76,9	.77,3	.78	.76,8	.74,3	.73,4	.69,5	.64,6
Colombia.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Ecuador.....	do.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
India.....	Silver rupee.....	.23,3	.23,4	.23,6	.23,3	.22,5	.22,2	.21,1	.19,6
Japan.....	Silver yen.....	.52,9	.53,2	.53,2	.52,8	.51,1	.50,5		
Mexico.....	Silver dollar.....	.53,3	.53,6	.54	.53,2	.51,5	.50,8	.48,2	.44,6
Persia.....	Silver kran.....	.09	.09,1	.09,2	.09	.08,7	.08,6	.08,2	.07,6
Peru.....	Silver sol.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Russia.....	Silver ruble.....	.39,3	.39,5	.39,8	.39,2	.37,9	.37,4		
Tripoli.....	Silver mahbub.....	.44,3	.44,5	.44,9	.44,2				

Countries.	Monetary unit.	1898.				1899.
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.
Bolivia.....	Silver boliviano.....	\$0.42,4	\$0.40,9	\$0.41,8	\$0.43,6	\$0.43,9
Central America.....	Silver peso.....	.41,4	.40,9	.41,8	.43,6	.43,9
	Amoy tael.....	.68,5	.66,2	.67,6	.70,6	.71
	Canton tael.....	.68,3	.66	.67,4	.70,4	.70,8
	Chefoo tael.....	.65,5	.63,3	.64,6	.67,5	.67,9
	Chinkiang tael.....	.66,9	.64,6	.66	.69	.69,3
	Fuchau tael.....	.63,4	.61,2	.62,5	.65,3	.65,6
	Haikwan tael.....	.60,7	.67,3	.68,8	.71,8	.72,2
China.....	Hankau tael.....	.64,1	.61,9	.63,2	.66	.66,4
	Ningpo tael.....	.64,3	.63	.65	.67,9	.68,2
	Niuchwang tael.....	.65,9	.62	.63,4	.66,2	.66,5
	Shanghai tael....	.62,6	.60,4	.61,7	.64,5	.64,8
	Swatow tael.....	.63,3	.61,1	.62,4	.65,2	.65,5
	Takao tael.....	.66	.66,6	.68	.71	.71,4
	Tientsin tael.....	.66,4	.64,1	.65,5	.68,4	.68,8
Colombia.....	Silver peso.....	.42,4	.40,9	.41,8	.43,6	.43,9
Ecuador.....	do.....	.42,4	.40,9	.41,8	.43,6	.43,9
India *.....	Silver rupee.....	.20,1	.19,1	.19,9	.20,7	.20,8
Mexico.....	Silver dollar.....	.46	.44,4	.45,4	.47,4	.47,7
Persia.....	Silver kran.....	.07,8	.07,5	.07,7	.08	.08,1
Peru.....	Silver sol.....	.42,4	.40,9	.41,8	.43,6	.43,9

* The commercial value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal.....	4.422 gallons.
Ardeb.....	Egypt.....	7.6907 bushels.
Are.....	Metric.....	0.02471 acre.
Arrobe.....	Paraguay.....	25 pounds.
Arratel or libra.....	Portugal.....	1.011 pounds.
Arroba (dry).....	Argentine Republic.....	25.3175 pounds.
Do.....	Brazil.....	32.38 pounds.
Do.....	Cuba.....	25.3664 pounds.
Do.....	Portugal.....	32.38 pounds.
Do.....	Spain.....	25.36 pounds.
Do.....	Venezuela.....	25.4024 pounds.
Arroba (liquid).....	Cuba, Spain, and Venezuela.....	4.263 gallons.
Arshine.....	Russia.....	28 inches.
Arshine (square).....	Do.....	5.44 square feet.
Artel.....	Morocco.....	1.12 pounds.
Baril.....	Argentine Republic and Mexico.....	20.0787 gallons.
Barrel.....	Malta (customs).....	11.4 gallons.
Do.....	Spain (raisins).....	100 pounds.
Berkovets.....	Russia.....	361.12 pounds.
Bongkal.....	India.....	832 grains.
Bouw.....	Sumatra.....	7,096.5 square meters.
Bu.....	Japan.....	0.1 inch.
Butt (wine).....	Spain.....	140 gallons.
Caffiso.....	Malta.....	5.4 gallons.
Candy.....	India (Bombay).....	529 pounds.
Do.....	India (Madras).....	500 pounds.
Cantar.....	Morocco.....	113 pounds.
Do.....	Syria (Damascus).....	575 pounds.
Do.....	Turkey.....	124.7036 pounds.
Cantaro (cantar).....	Malta.....	175 pounds.
Carga.....	Mexico and Salvador.....	300 pounds.
Catty.....	China.....	1.333½ (1¼) pounds.
Do*.....	Japan.....	1.31 pounds.
Do.....	Java, Siam, and Malacca.....	1.35 pounds.
Do.....	Sumatra.....	2.12 pounds.
Centaro.....	Central America.....	4.2631 gallons.
Centner.....	Bremen and Brunswick.....	117.5 pounds.
Do.....	Darmstadt.....	110.24 pougds.
Do.....	Denmark and Norway.....	110.11 pounds.
Do.....	Nuremberg.....	112.43 pounds.
Do.....	Prussia.....	113.44 pounds.
Do.....	Sweden.....	93.7 pounds.
Do.....	Vienna.....	123.5 pounds.
Do.....	Zollverein.....	110.24 pounds.
Do.....	Double or metric.....	220.46 pounds.
Chih.....	China.....	14 inches.

* More frequently called "kin." Among merchants in the treaty ports it equals 1.33½ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan.....	Sarawak.....	3,098 pounds.
Do.....	Slam (Koyan).....	2,667 pounds.
Cuadra.....	Argentine Republic.....	4.2 acres.
Do.....	Paraguay.....	78.9 yards.
Do.....	Paraguay (square).....	8.077 square feet.
Do.....	Uruguay.....	Nearly 2 acres.
Cubic meter.....	Metric.....	35.3 cubic feet.
Cwt. (hundredweight).....	British.....	112 pounds.
Dessiatine.....	Russia.....	2.6997 acres.
Do.....	Spain.....	1.599 bushels.
Drachme.....	Greece.....	Half ounce.
Egyptian weights and measures.....	(See CONSULAR REPORTS NO. 144.)	
Fanega (dry).....	Central America.....	1.5745 bushels.
Do.....	Chile.....	2.575 bushels.
Do.....	Cuba.....	1.599 bushels.
Do.....	Mexico.....	1.54728 bushels.
Do.....	Morocco.....	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do.....	Uruguay (double).....	7.776 bushels.
Do.....	Uruguay (single).....	3.888 bushels.
Do.....	Venezuela.....	1.599 bushels.
Fanega (liquid).....	Spain.....	16 gallons.
Feddán.....	Egypt.....	1.03 acres.
Frail (raisins).....	Spain.....	50 pounds.
Frasco.....	Argentine Republic.....	2.5096 quarts.
Do.....	Mexico.....	2.5 quarts.
Fuder.....	Luxemburg.....	264.17 gallons.
Garnice.....	Russian Poland.....	0.88 gallon.
Gram.....	Metric.....	15.432 grains.
Hectare.....	do.....	2.471 acres.
Hectoliter:		
Dry.....	do.....	2.838 bushels.
Liquid.....	do.....	26.417 gallons.
Joch.....	Austria-Hungary.....	1.422 acres.
Ken.....	Japan.....	6 feet.
Kilogram (kilo).....	Metric.....	2.2046 pounds.
Kilometer.....	do.....	0.621376 mile.
Klafter.....	Russia.....	216 cubic feet.
Koku.....	Japan.....	4.9629 bushels.
Korree.....	Russia.....	3.5 bushels.
Last.....	Belgium and Holland.....	85.134 bushels.
Do.....	England (dry malt).....	82.52 bushels.
Do.....	Germany.....	2 metric tons (4,480 pounds).
Do.....	Prussia.....	112.29 bushels.
Do.....	Russian Poland.....	11½ bushels.
Do.....	Spain (salt).....	4,760 pounds.
Do.....	Paraguay.....	4,633 acres.
League (land).....	China.....	2,115 feet.
Li.....	Castilian.....	7,100 grains (troy).
Libra (pound).....	Argentine Republic.....	1.0127 pounds.
Do.....	Central America.....	1.043 pounds.
Do.....	Chile.....	1.014 pounds.
Do.....	Cuba.....	1.0161 pounds.
Do.....	Mexico.....	1.01465 pounds.
Do.....	Peru.....	1.0143 pounds.
Do.....	Portugal.....	1.011 pounds.
Do.....	Uruguay.....	1.0143 pounds.
Do.....	Venezuela.....	1.0161 pounds.
Liter.....	Metric.....	1.0567 quarts.
Livre (pound).....	Greece.....	1.1 pounds.
Do.....	Guiana.....	1.0791 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Load.....	England (timber).....	Square, 50 cubic feet; unhewn, 40 cubic feet; 1 inch planks, 600 super- ficial feet.
Manzana.....	Costa Rica.....	1½ acres.
Do.....	Nicaragua and Salvador.....	1.777 acres.
Marc.....	Bolivia.....	0.507 pound.
Maund.....	India.....	82½ pounds.
Meter.....	Metric.....	39.37 inches.
Mil.....	Denmark.....	4.68 miles.
Do.....	Denmark (geographical).....	4.61 miles.
Milla.....	Nicaragua and Honduras.....	1.1493 miles.
Morgen.....	Prussia.....	0.63 acre.
Oke.....	Egypt.....	2.7225 pounds.
Do.....	Greece.....	2.84 pounds.
Do.....	Hungary.....	3.0817 pounds.
Do.....	Turkey.....	2.85418 pounds.
Do.....	Hungary and Wallachia.....	2.5 pints.
Pic.....	Egypt.....	21¼ inches.
Picul.....	Borneo and Celebes.....	135.64 pounds.
Do.....	China, Japan, and Sumatra.....	133½ pounds.
Do.....	Java.....	135.1 pounds.
Do.....	Philippine Islands (hemp).....	139.45 pounds.
Do.....	Philippine Islands (sugar).....	140 pounds.
Pie.....	Argentine Republic.....	0.9478 foot.
Do.....	Castile.....	0.91407 foot.
Pik.....	Turkey.....	27.9 inches.
Pood.....	Russia.....	36.112 pounds.
Pund (pound).....	Denmark and Sweden.....	1.102 pounds.
Quarter.....	Great Britain.....	8.252 bushels.
Do.....	London (coal).....	36 bushels.
Quintal.....	Argentine Republic.....	101.42 pounds.
Do.....	Brazil.....	130.06 pounds.
Do.....	Castile, Chile, Mexico, and Peru.....	101.61 pounds.
Do.....	Greece.....	123.2 pounds.
Do.....	Newfoundland (fish).....	112 pounds.
Do.....	Paraguay.....	100 pounds.
Do.....	Syria.....	125 pounds.
Do.....	Metric.....	220.46 pounds.
Rottle.....	Palestine.....	6 pounds.
Do.....	Syria.....	5¾ pounds.
Sagen.....	Russia.....	7 feet.
Salm.....	Malta.....	490 pounds.
Se.....	Japan.....	0.02451 acres.
Seer.....	India.....	1 pound 13 ounces.
Shaku.....	Japan.....	11.9305 inches.
Sho.....	do.....	1.6 quarts.
Standard (St. Petersburg).....	Lumber measure.....	165 cubic feet.
Stone.....	British.....	14 pounds.
Suerte.....	Uruguay.....	2,700 cuadras (see cua- dra).
Sun.....	Japan.....	1.193 inches.
Tael.....	Cochin China.....	590.75 grains (trov).
Tan.....	Japan.....	0.25 acre.
To.....	do.....	2 pecks.
Ton.....	Space measure.....	40 cubic feet.
Tonde (cereals).....	Denmark.....	3.94783 bushels.
Tondeland.....	do.....	1.36 acres.
Tsubo.....	Japan.....	6 feet square.
Tsun.....	China.....	1.41 inches.
Tunna.....	Sweden.....	4.5 bushels.
Tunnland.....	do.....	1.22 acres.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Vara.....	Argentine Republic.....	34.1208 inches.
Do.....	Castile.....	0.914117 yard.
Do.....	Central America.....	32.87 inches.
Do.....	Chile and Peru.....	33.367 inches.
Do.....	Cuba.....	33.384 inches.
Do.....	Curaçao.....	33.375 inches.
Do.....	Mexico.....	33 inches.
Do.....	Paraguay.....	34 inches.
Do.....	Venezuela.....	33.384 inches.
Vedro.....	Russia.....	2.707 gallons.
Vergees.....	Isle of Jersey.....	71.1 square rods.
Verst.....	Russia.....	0.663 mile.
Vlocka.....	Russian Poland.....	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.

Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.

Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.

Gram equals 15.432 grains.

Decagram (10 grams) equals 0.3527 ounce.

Hectogram (100 grams) equals 3.5274 ounces.

Kilogram (1,000 grams) equals 2.2046 pounds.

Myriagram (10,000 grams) equals 22.046 pounds.

Quintal (100,000 grams) equals 220.46 pounds.

Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.

Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.

Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.

Liter equals 0.908 quart.

Decaliter (10 liters) equals 9.08 quarts.

Hectoliter (100 liters) equals 2.836 bushels.

Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.

Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.

Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.

Liter equals 1.0567 quarts.

Decaliter (10 liters) equals 2.6418 gallons.

Hectoliter (100 liters) equals 26.418 gallons.

Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.

Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.

Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.

Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.

Hectometer (100 meters) equals 328 feet 1 inch.

Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).

Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.

Are (100 square meters) equals 119.6 square yards.

Hectare (10,000 square meters) equals 2.471 acres.

CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

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COMMERCE AND INDUSTRIES OF MEXICO.

The following paragraphs are from the annual report of Consul-General Barlow, of Mexico. The full report will appear in Commercial Relations, 1897-98.

The climate of the Republic varies from cold to tropical heat, and it is owing to this circumstance that the products of the soil are so varied; hence, the country offers exceptional inducements to industrious and intelligent emigrants and to capitalists, from the great profits that are to be expected, and this fact is admitted generally. Most of the great fortunes of Mexico are derived from plantations whose owners rarely see them, and who enjoy large revenues from them and are able to live where they choose, much after the fashion of the landed class in the South previous to 1860, except that the evil of slavery is unknown, and the people are contented and happy. Their wants are few, they make good workmen, are docile and easily managed if treated with humanity, and, once you succeed in gaining their confidence, they are excellent factors in the success of an enterprise. Strikes among them are very rare, and such a thing as the interference by employees with the operations of a factory or other enterprise by force is unknown and would be punished by severe penalties. The result of this state of things is that large manufacturing enterprises are being started everywhere in the Republic, and they are doing well, increasing their operations, and the failure of any of them is practically unknown. In fact, failures of any kind are very rare. Most of the business men are making money, and

the stocks of goods in the large shops in the City of Mexico will compare favorably with those to be found in any of the large capitals of the world, although the mammoth department store is unknown here.

To return to the resources of the soil. All that is produced in Europe and America can be profitably raised in some part of Mexico, and all that the country requires is large immigration to develop its great natural resources. The maguey plant, which has been cultivated extensively, can be put to many different uses. The Indians make a rough sort of cloth, working with it as with cotton or any other textile plant. Out of its fiber they make many different sorts of stuffs, and all these without the aid of modern appliances. Besides, from the juice of the maguey is made a sort of liquor, called mescal, much liked by the natives and said to be very efficacious in certain maladies. From the same maguey juice the well-known pulque is made, which is to the native what beer is to the German and cheap red wine to the French laborer. A splendid quality of paper is also made from the fiber of this plant.

Among the cereals are corn, wheat, barley, rice, and all known breadstuffs. The olive and the vine can be cultivated profitably in some of the States of the Republic. The excellent results of coffee planting in Mexico are so well known as to need no mention; but it may be well to state that even this industry is comparatively in its infancy, as well as the raising of cocoa, and that extensive properties admirably adapted to the cultivation of coffee, cocoa, tobacco, vanilla, indigo, cotton, sarsaparilla, henequen, ixtle, jallap root, sugar cane, rubber, chili, beans of all kinds, lentils, artichokes (equal to the best French), pineapples, cocoanuts, and vegetables of all kinds can be bought at ridiculously low prices from the point of view of other countries where these industries are highly developed. The sugar industry, although in its infancy, has given good results where it has been tried. There is also a well-paying business to be developed through the culture and judicious cutting of valuable woods, such as rosewood and mahogany. The various uses to which they could be put would exceed the scope of this report, which is a sketch of the country in general, though special reports will be sent from time to time to the Department on industries that seem of interest.

Cattle raising is one of the principal industries of Mexico, since the soil in many portions is very well adapted thereto—as also to sheep raising—and not only are dairy farms now becoming quite common and the results from them excellent, but, besides supplying the requirements of the Republic, large quantities of beef cattle have been shipped out of the country this last year and sold at high prices on a gold basis.

Silkworms have been imported lately, and, so far as the experience of those interested goes, the industry will be profitable.

The development of agriculture has naturally produced a large demand for agricultural implements, and with the increased purchasing power of the people there has arisen a necessity for cotton and woollen manufactures, and factories are springing into existence at many points, some accessible to the railways and some even in out-of-the-way places, all of which seem to be doing well. The writer has seen paper mills, glass works, china manufactories, manufactories of stamped goods, and many others.

As an example of the favorable laws that must eventually attract colonists to Mexico in large numbers, attention is called to the principal clauses of the law of December 15, 1893, in which it is enacted that colonists may purchase bodies of land consisting of as much as 2,500 hectares (6,250 acres) at prices that are each year established by the Government, which last year were as follows:

State.	Price per hectare (2.471 acres).	
	Mexican.	United States.
Morelos	\$4.50	\$2.106
Federal District.....	5.60	2.73
Aguas Calientes.....	2.25	1.098
Campeche.....	1.50	.738
Coahuila.....	1.00	.488
Colima.....	2.00	.976
Chiapas.....	2.00	.976
Chihuahua.....	1.00	.488
Durango.....	1.00	.488
Guerrero, Nuevo Leon, Oaxaca, Sinaloa, Sonora, Tamaulipas.....	1.00	.488
Yucatan.....	1.80	.878
Hidalgo, Jalisco, Michoacan, San Luis Potosi, Tlaxcala, Zacatecas, Tepic.....	2.25	1.098
Lower California.....	.50	.244
Tabasco, Veracruz.....	2.50	1.22
Guanajuato, State of Mexico, Puebla, Querétaro.....	3.35	1.634

The payment for these lands will be extended by the Government to cover a period of ten years, the payments to begin in the second year after the occupation, or, if cash is paid, a reasonable concession in price is granted. For ten years after their arrival, colonists enjoy the following privileges: Exemption from military service and from all kinds of taxes, except municipal taxes, which are very small; exemption from import duties on provisions, agricultural implements, machinery, tools, construction materials for houses, furniture, and cattle for farm use or for cattle raising; exemption from export duties on all fruits raised which the said colonists wish to export (this last exemption is personal and nontransferable); ex-

emption from taxes for stamps for the legalization of signatures and passports that the colonists may have, in order to prove that they are desirable immigrants and have a good reputation in their own country, a certificate in regard to which is required by the Mexican Government. As may be seen from the foregoing, the Government of Mexico is extremely liberal in its treatment of the right sort of immigrants; and now that this fact is becoming generally known, it is not unreasonable to suppose that immigration will greatly increase and that the prosperity of the country will become more and more apparent to the world.

I would not advise Americans without some capital to seek their fortunes in Mexico, since the same reasons that often render investments here extremely profitable make it all the harder for our laborers, accustomed to good wages and comforts which, as employees of others, they could not obtain here. Wages are low in general throughout this Republic, and have not increased in proportion to the value of lands and some exportable products.

Furthermore, I should not advise anyone to come here to locate without some knowledge of Spanish, for, especially in the small towns and the country, a man unacquainted with the language would be at a great disadvantage.

IMPORTS.

The following table, prepared by the Minister of the Treasury, shows the imports into Mexico during the fiscal year ended June 30, 1898, as compared with the fiscal year ended June 30, 1897. As will be seen, in spite of the establishment of factories here, there was an actual increase of \$1,399,397 in imports during the fiscal year 1897-98, and this in spite of the fact that \$2,600,268 worth of American corn was imported in 1896-97, owing to the partial failure of the corn crop in this Republic, whereas in 1897-98 only \$43,069 worth of this cereal was brought into the country. The increase might therefore be estimated on the basis of normal conditions as nearly \$4,000,000. The table following this statement of imports shows what part thereof came from the various countries competing for Mexican business, and, as will be noted, 49 per cent came from the United States, showing a decrease of 4 per cent from the fiscal year 1896-97.

The reason for this decrease, aside from the diminution in corn shipments to Mexico, is that our exporters are not paying the same attention to the commercial customs of this Republic that is given by manufacturers of other nations, principally England, France, and Germany. The business conditions of Mexico are noteworthy, and it will be of much pecuniary benefit to our merchants to study them. In the first place, there are very few concerns doing business

here that have not ample capital to carry out all contracts into which they may enter. Failures are very rare indeed, and when they do occur are carefully investigated by the authorities in the interests of creditors, and any attempts to defraud are severely punished. Book entries are regarded as sacred; all books kept by business houses are known and small stamp taxes paid on them, and thus a sort of surveillance is kept over them by Government authorities. All this tends to keep up a high standard of commercial credit; and, now that the commercial agency of R. G. Dun & Co. has extended its operations to this Republic, exact knowledge of the standing of the business houses here may be obtained.

As the terms of our American merchants are often very rigid, it is hard to reach an agreement, and much trade which by the exercise of a little tact and judgment could be handled by American merchants goes elsewhere. For instance, terms usually offered by European merchants are four to six months' time, whereas American houses often require that the total amount of their invoices be placed in some bank in the United States before the goods are shipped.

With good local agents on the ground familiar with the language and the character of the buyers, the question might be easily settled. The superiority of many kinds of American goods is readily admitted here, and Mexican buyers are desirous of dealing with the United States and would do so more extensively than at present, if trading facilities were offered them. I do not suggest that the full time offered by other nations be always granted, since we have many goods that this Republic must have, and these, of course, can be sold practically on our own terms; but I do say that the business methods of Mexico should be carefully studied. Buyers and sellers should acquire mutual confidence, and, where that can not be attained, no business should be done. A happy medium between extended time and the requiring of a deposit before shipment would seem to be to ship to reliable manufacturers' agents, have them import the goods, and then deliver them and collect and remit therefor according to contract.

A few words as to the value of contracts in Mexico. Once an absolute understanding is had between buyer and seller and the agreement reduced to writing, there is seldom any controversy, as a contract or a preliminary contract (known here as a *minuta*) is regarded as binding, even though the only legal forms required in a "*minuta*" are the affixing of a 50-cent stamp and the depositing of the *minuta* with a notary public, to be reduced to a public deed when one of the interested parties requires it.

*Countries from which imports have come.**

Countries.	1897-98.	1896-97.
Germany.....	\$4,781,821	\$4,003,263
Arabia.....	60	282
Argelia.....	787	802
Australia.....	33,744	24,833
Austria.....	125,144	128,367
Belgium.....	590,106	479,850
Bolivia.....		214
Brazil.....	8,658	240
Canada.....	1,991	3,356
Chile.....	867	6,203
China.....	41,157	51,357
Columbia.....	24,127	64,317
Denmark.....	1,201	3,614
Ecuador.....	73,681	53,249
Egypt.....	22,297	10,271
Spain.....	2,039,132	1,983,794
United States.....	21,490,604	22,593,860
France.....	5,435,668	4,989,082
Greece.....	3,833	1,660
Guatemala.....	14,950	46,323
Holland.....	103,913	132,728
Honduras.....		3
India.....	154,115	210,845
England.....	8,105,666	6,881,701
Cuba.....	1,130	363
Italy.....	186,273	184,186
Japan.....	24,013	23,673
Norway.....	45,219	41,670
Persia.....	570	784
Peru.....	314	108
Portugal.....	44,999	22,653
Argentine Republic.....	90	1,897
Salvador.....	3,648	452
Dominican Republic.....	38	1,071
Russia.....	19,644	31,387
Senegambia.....	1,785	902
Sweden.....	21,466	29,078
Switzerland.....	156,732	163,293
Turkey.....	3,831	3,267
Uruguay.....	52	33
Venezuela.....	36,963	27,608
Zanzibar.....	3,053	1,456
Total.....	43,603,492	42,204,095

EXPORTS.*

As to the exports by countries, amounting to \$128,972,749 (\$58,166,719) in 1897-98, \$94,974,616 (\$42,833,552) went to the United States, or 73 per cent of the total amount exported from Mexico, as against 77 per cent in 1896-97.

The increase of \$8,250,000 (\$2,953,500) in volume is very satisfactory, and, in the face of the higher duties imposed by the Dingley

* The Mexican customs estimate the value of imports in gold and of exports in silver.

tariff, is the more noteworthy; but, as will be seen, the export business of the United States has not kept pace with the increase in the general exports, whereas some other countries have greatly increased their purchases of Mexican goods; for example:

France, which in 1896-97 bought of Mexico but \$1,873,522 (\$670,743), bought in 1897-98 \$5,320,016 (\$1,904,587), an increase of \$3,446,494 (\$1,233,844). Holland, which is reaching out for trade here, increased from \$57,906 (\$20,730) in 1896-97 to \$719,322 (\$257,517)—an increase of \$661,416 (\$236,787). Cuba shows the most notable increase, from \$53,503 (\$19,155) in 1896-97 to \$2,152,544 (\$770,611) in 1897-98; this is due to the fact that Cuba had to have certain Mexican products, and that the advantage in favor of Spain was greatly diminished.

Germany's increase, though large, was not so remarkable, being \$2,578,989 (\$923,278); while the small Kingdom of Belgium about keeps pace with England, since the former increased \$421,765 (\$150,992), whereas the latter, with its position of second only to the United States (though at a great distance), increased only \$495,111 (\$177,249). The Mexican dollar has not varied much during the last six months of the fiscal year—only a few points, which fluctuations have caused no inconvenience of any kind.

GOLD PRODUCTION.

Ever since 1886, when silver began to fall to an alarming extent, the Government understood that it would be useful to stimulate the production of gold by facilitating the exploration and working of the placers and conceding special franchises and concessions to companies guaranteeing to work them with sufficient capital. This was the opinion of competent persons who were charged to study the crisis and the means of remedying it; and when, in 1894, things came to such a state that there occurred almost a panic, the Government laid before Congress the law of the 4th of June of that year. This law authorized the Executive to grant, during one year, concessions for exploring and working placer and auriferous mines to companies who guarantee to invest a capital of \$500,000 during the first three years and \$1,000,000 in five years. In exchange, these companies enjoyed a reduction of the annual mining tax up to 10 per cent, and were exempt from all other federal tax except the stamp tax; they could also introduce into the country, free of duty, the necessary machinery, tools, etc. Three large contracts were executed under this law, and they have been exactly fulfilled in all details. They were for the exploring and working of mines in Oaxaca, Sinaloa, and Lower California.

The following table will show the increase in the production of gold:

1892-93.....	\$1, 269, 907
1893-94.....	1, 224, 621
1894-95 (under the law).....	4, 744, 542
1895-96.....	6, 054, 078
1896-97.....	5, 861, 126
1897-98.....	7, 584, 182

These values are at par. According to the average rate of exchange of the last fiscal year, the gold exported represents nearly \$16,000,000 (Mexican).

Taking into account that which is exported surreptitiously, there being certain portions of Mexico, such as the Territory of Lower California, where it is very difficult to control the output on account of the large extent of seacoast, it is not an exaggeration to calculate the production during the last year at \$19,000,000 (Mexican).

It would thus seem that this is a prosperous branch of production, greatly increasing, and giving promise of a brilliant future. The railroad through Guerrero will help to develop even more this branch of national riches.

As a complement to what refers to the production of precious metals and their progress, I give the table which follows, of the production of silver:

	Mexican.
1881-1885 (4 years).....	\$157, 826, 478
1886-1890.....	199, 208, 204
1892-1896.....	225, 247, 459
1896-97 (fiscal year).....	63, 688, 503
1897-98 (fiscal year).....	65, 119, 606

FUEL.

The fuel question has aroused much interest here, especially during the last ten years, and the Mexican Government has viewed with apprehension the destruction of the forests in the Federal District and the States adjacent, fearing changes in climate and rainfall were the mountains to be laid bare. In the tropical parts of Mexico, this question is not so momentous, as the growth there is so luxuriant that the trouble is rather to suppress it. It is well known that comparatively little coal that it will pay to mine has been found in this Republic, and what has been developed profitably is located not far from the Rio Grande; therefore a solution had to be reached, and it would appear that the numerous companies that have announced their intention to supply the City of Mexico and other cities in this Republic with electric power brought from a distance will supply to a great extent the lack of cheap fuel. The street-car system of the

City of Mexico is in process of transition from mule and steam power to electricity, and many of the manufacturing plants that now use wood or coal will follow the example of the street railway.

This does not mean necessarily that there will be any decrease in the importation of coal from the United States, since there is a great demand for American coal all over this Republic, and during the fiscal year 1897-98 the importations amounted to \$924,423 (Mexican), as against \$881,557 the fiscal year previous. Coal is admitted free. There are many ways by which it can be brought into this Republic, and the trade with the United States seems likely to increase if proper effort is made by our people to secure it.

LINEN MILLS.

Among the manufacturing interests that have been developed recently, I find linen mills coming into prominence, and, whereas in former times all the flax used came from Ireland, it is now produced in several States of this Republic and has given excellent results. The mills will contract for all that is raised at a fair price, and it is they that have gone to considerable trouble and expense to stimulate the native production of flax, which is now increasing rapidly, although as yet not nearly supplying the needs of the linen manufacturers of Mexico.

UNITED STATES-MEXICAN FREIGHT RATES.

It is beyond the purpose of this report to undertake to name all rates between the two countries, but I have endeavored to give a general idea of the rates charged on the commodities commonly imported and exported. Both freight and passenger rates are determined here, as in the United States, by traffic associations presided over by a chairman, and the rates named by him are reasonably stable, though, as is customary, subject to change with or without notice, as may be stipulated. All intending shippers should communicate with the railway and obtain rates on the goods they expect to ship before making sale of same. The main purpose of these rates and the Mexican classification is to suggest what articles are dealt in in this Republic. The extent may be determined by a careful study of the imports and exports.

The following rates are in United States currency per 100 pounds, carload lots:

Articles.	From—	To—	Rate.
Agricultural implements and machinery.	New York.....	Mexico City.....	\$1.13
Ale or ginger ale, packed.....	do	do .....	.82
Bagging and bags.....	do	do .....	.80
Belting	do	do	* 1.22
Bluestone	do	do .....	.80
Books, boxed.....	do	do	* 1.22
Boots and shoes, boxed.....	do	do	1.22
Brick, fire.....	do	do .....	.70
Candles	do	do	1.00
Canned goods.....	do	do .....	.95
Carpets.....	do	do	* 1.32
Cement, in barrels.....	do	do .....	.59
Corks.....	do	do	* 1.77
Drugs and medicines.....	do	do	* 1.22
Electrical appliances.....	do	do .....	.90
Firearms	do	do	1.32
Furniture	do	do	1.38
Glassware.....	do	do	1.20
Glass (mirrors).....	do	do	* 1.47
Groceries.....	do	do	* 1.08
Hops, compressed.....	do	do	* 1.22
Ink	do	do	* 1.08
Insulators.....	do	do	* .85
Iron, bar and corrugated.....	do	do .....	.70
Iron beams.....	do	do .....	.90
Liquors, wines, whiskies, etc., in glass, packed.	do	do	1.00
Machinery	do	do .....	.90
Mineral water.....	do	do	* 1.08
Nails and spikes.....	do	do .....	.75
Oil, lubricating.....	do	do .....	.90
Paints.....	do	do	* .85
Paper	do	do .....	.95
Pulp, wood.....	do	do .....	.75
Rails and fastenings.....	do	do .....	.38
Stationery.....	do	do	* 1.22
Tinware, nested.....	do	do	* 1.22
Wheels, car.....	do	do	* 1.22
Feathers	Veracruz and Tampico.....	New York.....	.63
Mineral ores.....	do	do .....	.21
Hides	do	do .....	.40
Coffee.....	do	do .....	.27
Chicle.....	do	do .....	.53
Deerskins	do	do	1.05
Goatskins	do	do .....	.50
Beans	do	do .....	.32
Horns.....	do	do .....	.27
Hair.....	do	do .....	.67
Bones.....	do	do .....	.27
Tobacco.....	do	do	† 1.58
Honey.....	do	do	‡ 2.10
Fruit.....	do	do	\$.21

* Less than carloads.

† Per bale.

‡ Per barrel.

§ Per cubic foot.

Articles.	From—	To—	Rate.
Beans	All stations between Lampazos and Saltillo, both inclusive.	San Antonio, Tex.....	\$.38
	Gomez Farias to Vanegas.....	.....do .....	.48
	Catorce to Rincon.....	.....do .....	.58
	San Luis Potosi to Salvatierra, both inclusive.	Austin and intermediate points, except where lower rates are provided.	.62
	.....do	All other points on I. M. Rwy. north of Austin, including Houston and Galveston, and points south of Palestine.	.65
	.....do	Points in Texas on the M. K. & T., except the 9 & S branch 7 & 5 & L and S. W. Rwy.	.70
	.....do	Texas common points on Y. C. & S. T. Rwy. (points taking higher than common-point rates to be the usual differential higher).	.70
	.		
Ixtle.....	Moctezuma, Venado, Los Charcos, La Luna Seca, Catorce, Vanegas, El Salado, La Ventura, via Laredo Y. M. and Galveston.	New York .....	.63
	Satillo, Ramos Arispe, Santa Maria, Monterey, via Laredo Y. M. and Galveston.	.....do .....	.50
Zacaton (broom root).....	Mexico .....	.....do .....	.50
	Maravatio.....	.....do .....	.60
	Toluca .....	.....do .....	.56½
	Patzcuaro .....	.....do .....	.94
	Flor de Maria .....	.....do .....	.59
Hides and skins.....	Lampazos and Monterey.....	.....do .....	.50
	Saltillo.....	.....do .....	.55
	Vanegas.....	.....do .....	.70
	Catorce .....	.....do .....	.70
	Montezuma .....	.....do .....	.55
	San Luis Potosi.....	.....do .....	.50
	All routes between Villa Reyes and Maravatio, inclusive.	.....do .....	.75
	Morelia branch points.....	.....do .....	.80
	Toluca .....	.....do .....	.60
	Mexico .....	.....do .....	.50
Bones (minimum, 24,000 pounds per car).	Monterey.....	St. Louis, Mo.....	.37½
	Mexico City, Jesus María, and all intermediate points, including stations on El Salto and Morelia branches.	New Orleans.....	.40
	San Luis Potosi, Santa María, and all intermediate points.	.....do .....	.35
	García, La Santa, and all intermediate points.	.....do .....	.30
	Catorce, La Santa, and all intermediate points.	Galveston .....	.32½

a native of Virginia, now of New York. The president is Robert M. Thompson, esq., (president, New York Metal Exchange); secretary, Charles H. Sherrell (lawyer); and Charles R. Lee (manager of United States Leather Company) is treasurer. Messrs. Dent, Palmer & Co., of London and New York, finance the enterprise, and it is stated that the entire sum necessary to build the road has been secured.

The board of directors number twenty-two, and are as follows: American—R. M. Thompson, Ex-Governor George Hoadley, George Coppel (of Maitland, Coppel & Co.), J. H. Powers Farr (of Kilbreth & Farr), George Norton (of Norton, Tunstall & Co.), Stuart Coates (of J. & P. Coates Thread Company), Erskine Hewitt (vice Hon. Thomas F. Bayard, deceased), Col. W. F. Shunk, Thomas Carmichael (Dent, Palmer & Co.), Hon. A. S. Hewitt, Charles R. Lee, John C. Kilbreth, Archer Harman (27 Pine street, New York), T. Cooper Hewitt, and Charles H. Sherrell; English—Hon. St. George Lane Fox Pitt, Sir Allen Sarle, Sir Miles Fenton, and Sir Gerald Fitzgerald; Ecuadorian—Señor Don Luis Dillon, General Moncayo, and Señor Don Carlos Freile Zaldumbide.

The wealth and standing of a number of these directors seem to render the building of the road an assured fact. Mr. William F. Shunk, an engineer of high repute, is now in the field with a corps of associates determining the lines; and the actual work of construction, I am told by Mr. Harman, who has returned to the United States, is expected to begin by April or May next.

This railway will connect Quito, the capital, with Guayaquil, on the tidewater of the Pacific, and is to be, according to contract with the Government, 40-inch gauge with 50-pound rails. Of this line, there now exists a 60-mile road of 92-centimeter gauge in operation between Duran, the terminal opposite Guayaquil and Chimbo bridge. The broadening of gauge, laying of new ties and rails, improving roadbed, and other work, I am assured, will amount to almost a new construction of this part of the line. This road traverses the low alluvial coast section, which lies between the Andes and the ocean, partially reclaimed and devoted to the cultivation of cane, coffee, rice, cacao, and other tropical products.

The end of the road is at the foot of the western cordillera of the Andes, at an elevation of 345 meters (1,130 feet) above sea level, and for the next 60 miles there is a rise to Sibambe, through the forest slopes of the mountains, to an altitude of 2,481 meters (8,138 feet), a survey of which has been made during the last three years under the direction of Mr. J. V. S. Muller, an English engineer employed by the Ecuadorian Government. This is considered to be the most difficult part of the entire line, as the country is very abrupt and of andesite (an exceptionally hard rock) formation, besides

being side-hill forest, liable to landslides. This portion of the projected railway runs through a territory as yet undeveloped, on account of lack of transportation facilities, but which will become, I am told, immensely valuable for coffee and other crops when work is completed.

From Sibambe north to Quito, the road lies through the inter-Andean treeless plateau, so well known and of interest to geologists; no survey has as yet been made of this section, but it is known from barometrical measurements that the line will have to surmount three spurs of the cordilleras, ranging from 10,000 to 12,200 feet elevation each; but aside from this, no grave engineering difficulties seem to be presented. The country constitutes a part of what is known as the Sierras of Ecuador, a series of mountain valleys (between alternate ridges), having a mean elevation of 8,000 feet above sea level, abounding in every type of production peculiar to the temperate zone, comparatively populous, enjoying a cool and bracing climate, and seemingly only awaiting the completion of this railway to become commercially the most important section of Ecuador. What progress can a country expect, be Nature ever so bountiful, or population ever so dense and industrious, if separated from the outside world, as this section of Ecuador now is, by almost impassable mule trails, requiring ten or fifteen days to reach a market?

This is the work which is expected to be under construction within the next six months, to cost \$17,532,000 and to be completed within the next three or four years. Once completed, it will be a triumph of railway construction, as the country offers severe natural obstacles. Commercially, in opening up a region of wonderful fertility and agricultural wealth, the triumph will not be less marked.

At present, the Ecuador accessible to commerce is a low tropical coast, consisting of 19,725 square miles area, sparsely populated (242,000 inhabitants, Wolf's estimate), exporting principally cacao, rubber, hides, sugar, ivory nuts, and other tropical productions, but obliged to import almost every manufactured article and temperate-zone commodity needed for consumption. Meanwhile, the isolated part of Ecuador, which will be opened up by the projected railway, is an elevated plateau, of temperate and healthful climate, with an area of 20,680 square miles, comparatively populous and inhabited by an industrious people. This section has practically unlimited water power for manufacturing purposes; cotton grows wild on bushes, and the ranges for grazing purposes—production of wool and finest class of meats—are unrivaled. Cereals, garden truck, and fruits of all kinds spring up as if by magic from the grateful soil (volcanic ash), with a minimum of labor. Yet this region, on account of its poor transportation facilities, at present does virtually no ex-

port trade. There is, of course, some importation; but the proportion of those who are rich enough to use foreign articles is very small, and will continue to be so until, with the advent of the railway, wages and standards of living are raised.

At present, the material condition and morale of the great mass of inhabitants is pitiable, especially when one considers the lavishness with which Nature has showered her benefits upon their country; the type of the poorer class—principally pure Indian, but very industrious, peaceable, easily managed and radically different from our own aborigine in almost every respect—plows the ground with a stick, flails his grain, spins thread, and makes his own cloth, such as it is; carries enormous loads on his back, sells himself and his wife and children into what is practically slavery—in fact does everything in life in the same manner as his ancestors of the time of the Incas, living in abject ignorance and squalid poverty.

The proprietary classes are indifferent to modern machinery in the cultivation of their estates and the operation of their few manufactories. Labor is too cheap—10 to 40 cents a day in silver on the haciendas—and primitive methods are still adhered to. The community as a whole is little if any advanced beyond the civilization of Spanish colonial days. Empty pockets and idle brains drive restless spirits into politics, a feeling of insecurity prevails, constitutional liberty is not understood, and revolutions have scourged the country every few years.

President Alfaro has earnestly and persistently urged the building of the railroad, and has carried out his policy in the face of violent and virulent opposition. Its successful completion will render him a benefactor to his country, second only to Bolivar in the minds of those of his countrymen who regard the road as the "obra rendentora" (redeeming work) of the day, as it surely is. It will quicken and largely increase commerce; enhance the value of lands, attracting by reason of their fertility and the salubrity of the climate European and American immigration; improve wages, now so deplorably low; elevate the standard of living; promote education among a people apt, intelligent, and eager to emerge from the abyss of ignorance in which they are plunged; eliminate to some extent at least the political agitator; produce increase of revenue; promote respect for law and liberty, conducing to greater stability in Government; and, in a word, prove a blessing to Ecuador in every conceivable respect.

The parties in interest claim the railroad will pay almost from the start, and show their faith by putting their millions into it. The present short railroad traverses the large and wealthy Province of Guayas (6,180 square miles); but, owing to the magnificent fluvial

system in the coast section, it does not enjoy the carrying trade of more than one-tenth of the area. The four Provinces to be traversed by the railroad are Chimborazo, Pichincha, Leon, and Tunguragua. Those contiguous are Bolivar, Imbabura, and Cañar, containing, according to Wolf, a population of 715,000 (?), having no mode of ingress or egress save by costly mule carriage. The denser population and greater fertility of the section which will be opened warrant the assumption that the traffic will be proportionately considerably larger than that enjoyed by the Duran and Chimbo road, and induces the belief that in a very brief period the earnings of the line will pay running expenses and perhaps something on common stock; that it will eventually be a dividend earner is, in my opinion, assured. The construction of the road will inaugurate, as stated, a new era in Ecuador; few lands are so remarkably fertile and teem with such agricultural wealth, both tropical and temperate. The disbursements for labor alone, it is stated, will cost the construction company \$10,000,000 or more, gold. As the enterprise is essentially American, there will be an influx of Americans and closer relations with the United States, which should, and doubtless will, enjoy the lion's share of the commerce of the west coast of Central and South America as soon as we build an isthmian canal.

Minister Sampson, writing from Quito under date of November 19, 1898, gives the following additional details as to the railway:

Under the contract, the American company has found it advisable to buy the national debt of Ecuador, amounting to \$3,500,000, held in England. In the month of October, 1897, this was accomplished, the company becoming responsible to the bondholders for about \$1,500,000.

The company has also received a concession to establish a bank in Guayaquil, with a capital of \$1,000,000 gold. It is to be in operation by next March.

RAILWAY CONTRACT IN GUATEMALA.

On the 15th instant, *El Guatemalteco*, the official paper of this Republic, published the contract entered into between this Government and Martin Roberts, an American citizen, for the operation of the Guatemala Northern Railroad. The substantial facts appearing in said contract are as follows:

Mr. Roberts is in charge of the road from October 20, 1898. A daily train for passengers and for freight shall be run each way between Puerto Barrios and El Rancho. Telegraph lines are to be

maintained in good condition. The roadbed is to be always kept in good condition, and all ordinary repairs of line and rolling stock are to be made by the contractor.

The tariff for freight and passengers shall remain as at present and may not be altered without authority from the Government. All employees having relations with the public are required to understand Spanish and to make themselves understood in that language.

The Northern Railroad being a national company, foreigners connected with it are to be considered as Guatemalans in all matters connected with the company, and are subject to the laws of the country.

The contractor shall place 5,000 new ties each month on the line between Puerto Barrios and Gualan.

The contractor shall receive, as compensation for the work and services stipulated in this contract, 35,000 pesos (\$15,260)* monthly, and 2 pesos for each new tie laid down. These payments shall be made in the first ten days of the month succeeding that in which the work was done.

Besides these 35,000 pesos, all the receipts of the wharf at Puerto Barrios and the traffic on the line shall go to the contractor.

While this contract is in force, Mr. Roberts may import free of taxes or duties all material necessary for the operation and conservation of the telegraph line and railroad; also, monthly, the following merchandise:

Articles.	Quantity.	Articles.	Quantity.
Flour.....cwt.....	200	Salted hams.....kilograms...	400
Potatoes.....do.....	100	Crackers.....do.....	400
Ordinary preserves.....do.....	160	Maizena.....do.....	100
Sugar.....do.....	50	Codfish.....do.....	50
Rice.....do.....	25	Macaroni, etc.....do.....	100
Salt.....do.....	10	Matches.....do.....	50
Lard.....do.....	10	Pepper.....do.....	25
Beans.....do.....	10	Ordinary soap.....do.....	500
Coal oil.....casks.....	100	Tea.....do.....	50
Shirts, undershirts, drawers, and socks, dozen.....	40	Rubber coats.....do.....	50
Pantaloon for workmen.....dozen.....	20	Vinegar in barrel.....liters.....	100
Ordinary hats.....do.....	6	Oat meal.....kilograms.....	100
Ordinary tobacco.....pounds.....	1,550	Coffee grinders.....do.....	26
Ordinary shoes.....pairs.....	200	Mixed-wool blankets.....do.....	50
Salt meat.....barrels.....	10	Cotton handkerchiefs.....do.....	50
Ordinary earthenware.....do.....	1	Linen thread.....do.....	10
Ordinary glassware.....do.....	1	Cotton towels.....do.....	50
Tinware.....do.....	1	Mosquito bars.....do.....	50
Yeast.....kilograms†.....	40	Lanterns.....number.....	25
Bacon.....do.....	400	Wheat flour.....cwt.....	100
		Corn meal.....do.....	150

* The value of the Central American peso was estimated by the United States Director of the Mint, October 1, 1898, at 43.6 cents.

† 1 kilogram = 2.2046 pounds.

All contracts made with foreign workmen who are brought to the country will be recognized as valid by the Government. Employees of the road are exempt from military and civil service.

The administrative and operative force of the road shall consist of a general manager, bookkeeper, paymaster, assistant paymaster, train dispatcher, two engineers, two conductors, two firemen, two brakemen, two watchmen, four agents for first-class stations, five telegraph operators for first-class stations, one telegraph operator in each second-class office.

In the road department, there shall be one civil engineer, road-master with two assistants, fifteen section foremen, work-train gang, and sufficient on each section to do the work. In the machine shops, there shall be employed a master mechanic, a timekeeper, a clerk, and such machinists, carpenters, painters, and other workmen as may be necessary.

All questions in dispute shall be decided by arbitrators, one selected by Mr. Roberts and one by the Government; these will select beforehand a third person, who will act in case of discord between the two first named.

A. M. BEAUPRÉ,
Consul-General.

GUATEMALA, *November 25, 1898.*

PROPOSED RECIPROCITY BETWEEN CHILE AND ECUADOR.

I transmit herewith a translation of the proposed treaty of reciprocity between Ecuador and Chile. This treaty has been ratified by the Ecuadorian Congress at the session just ended, but does not go into effect until ratified by Chile. It seems quite likely that this will follow.

The principal advantage to be derived by Ecuador from this treaty seems to be in securing a market in Chile for her sugar, which during this year has been a thriving industry. The large refiners have combined effectively; a protective tariff has enabled them to maintain the local market at a firm and profitable price and export their surplus stock—about 60,000 quintals (6,613.8 tons) in 1898.

In other directions, the advantages to be derived are not so apparent.

The treaty, however, appears to be favorable to Chile in many respects; in some ways, at the cost of United States commerce, especially in the direction of flour, lumber, and other Pacific coast products. Statistics for the year 1897, taken from the books of the

custom-house, will show to what degree American interests are involved:

Flour imported into Ecuador in 1897.

Imported from—	Value in Ecuadorian silver.	Equivalent in United States gold.
Chile.....	\$275,552	\$131,215
United States.....	186,000	88,572
Other countries.....	800	381
Total (3,517.6 metric tons).....	462,352	220,168

Lumber imported into Ecuador in 1897.

Imported from—	Value in Ecuadorian silver.	Equivalent in United States gold.
United States.....	\$206,140	\$98,162
Chile.....	74,140	35,305
Other countries.....	2,200	1,047
Total (265,000 boards, weighing 5,893 metric tons).....	282,480	134,514

The liquor trade of Ecuador, neglected heretofore with characteristic indifference by our own merchants, is eagerly sought for by Chile and will probably be largely increased. California wines are superior in quality, and in point of price can compete with those of Chile, but as yet no effort has been made to cater to this market.

Wines (ordinary and medium grade) imported into Ecuador in 1897.

Imported from—	Ordinary.		Medium grade.		Total.	
	Value in Ecuadorian silver.	Equivalent in United States gold.	Value in Ecuadorian silver.	Equivalent in United States gold.	Value in Ecuadorian silver.	Equivalent in United States gold.
France	\$44,290	\$21,525	\$137,077	\$66,619	\$181,367	\$88,144
Spain	63,359	30,792	64,968	31,574	128,327	62,366
Germany	680	330	18,134	8,813	18,814	9,143
Chile	7,451	3,621	11,017	5,354	18,468	8,975
Italy	16,440	7,990	.....	.....	16,440	7,990
England.....	1,760	855	13,651	6,634	15,411	7,489
Peru	5,582	2,713	4,441	2,158	10,023	4,871
Belgium.....	544	264	6,141	2,984	6,685	3,248
United States.....	1,011	491	2,376	1,155	3,387	1,646
Colombia.....	950	462	.....	.....	950	462
China.....	51	25	26	13	77	38
Total	142,118	69,068	257,831	125,304	399,949	194,372

The Ecuadorian silver dollar (sucre) is equal to 48.6 cents in gold.*

Treaties of commercial reciprocity are not likely to precede marked individual effort; that between Chile and Ecuador must in-

* The valuation of October 1, 1898, by the United States Director of the Mint is: 1 sucre=43.6 cents.

juriously affect the trade which California enjoys, small though it be, with this country:

It is a fact of some significance that, prior to the imposition of a duty by Ecuador, sugar was in a depressed condition; since then, it has become a growing and profitable industry. On the other hand, the British West Indies, despite their more favorable geographical position as regards the markets of the United States, are in despair. Jamaica has almost abandoned sugar culture, and the other islands are bankrupt.

PERRY M. DE LEON,
Consul-General.

GUAYAQUIL, *December 10, 1898.*

TREATY OF COMMERCE AND NAVIGATION BETWEEN CHILE AND ECUADOR.

The Governments of Ecuador and Chile, with the object of developing reciprocal commerce, have resolved to form a commercial and navigation treaty, naming for this purpose their respective plenipotentiaries.

The President of the Republic of Ecuador by his Excellency Señor Dr. Don Carlos Freile Zaldumbide, minister plenipotentiary ad hoc, and the President of the Republic of Chile by his excellency Señor Don Beltram Mathieu, envoy extraordinary and minister plenipotentiary of Chile in Ecuador, who, having presented their respective plenary powers, given in good and regular form, have agreed to the following articles:

ARTICLE 1. The ships of either of the two nations are to be considered, in the ports of the other, like those under her own flag, so as to enjoy the facilities conceded to the national merchant marine.

ART. 2. The two Governments will reach an administrative understanding as to the way in which to subsidize companies who will establish direct navigation between the two contracting nations, and how to supervise the organization of their freight and passenger tariffs.

ART. 3. In the ports of export and import of Chile shall be received free of import duty the following Ecuadorian products:

- (a) Sugar of all grades and kinds not refined.
- (b) Tobacco in leaf, in twist, and in rolls.
- (c) Petroleum not refined.
- (d) Coffee.
- (e) Cocoa.
- (f) Fresh fruit or in preserves.

ART. 4. In the ports of export and import of Ecuador there shall be equally received free of import duty the following Chilean products:

(a) Ordinary common table wines, it being understood that there will be considered as such those imported in barrels or kegs and the price of which, according to invoice, does not exceed 8 pennies (16 cents) per liter, or the equivalent in the national money according to the rate of exchange.

- (b) Grape chicha (something like cider).
- (c) Hay.
- (d) Guano, saltpeter, and borax.
- (e) Bran.
- (f) Canary seed.
- (g) Live animals.

(k) Fresh fruits and vegetables, dried or in preserves, including nuts, small cocoanuts, hazelnuts, and almonds.

(i) Malt barley.

(j) Coarse wool.

(k) Shellfish, preserved.

(l) Roman cement.

(m) Coal and charcoal.

(n) Copper, iron, lead, tin, and zinc in mineral or bars.

ART. 5. Lumber for construction (including boards planed and matched), wheat flour of Chile, and cane and straw hats from Guayaquil will be admitted in the respective countries with a discount of 50 per cent on the import duties.

ART. 6. The exemption from duties established by the foregoing articles does not include the expenses of disembarkation, wharfage, warehouse charges, etc.

ART. 7. The national origin of the products will be verified by means of certificates from the custom-house authorities of the port of shipment and by the consul of the country to which the products are shipped. The dispatching will conform with the formalities established in each country for the examination and verifying of merchandise.

ART. 8. For the certificates or certified consular invoices, referred to in the preceding article, the consuls will receive only the fees established in the respective tariffs; but the Governments reserve to themselves the right to impose a special contribution on all certificates issued by their custom-house authorities.

ART. 9. The present treaty, once ratified, will be in force from the time direct steam navigation between the two countries is established. It will continue for four years and will remain in full effect until one year after either of the ratifying parties signifies to the other the intention to terminate the treaty in whole or in part of its stipulations; nevertheless, the franchises accorded to sugar and flour may cease at any time during the continuance of the treaty.

ART. 10. The legal formalities being completed, this agreement will be ratified and the ratification will be celebrated in Quito or in Santiago in the shortest possible time.

In faith of which the respective plenipotentiaries sign this treaty ad referendum and affix their respective seals in Quito, the 30th of May, 1898.

CARLOS FREILEZ.

BELTRAM MATHIEU.

SHOES AND ARMS IN PARAGUAY.

The importation of shoes is very small, due in part to the production of leather here. Were the shoes for importation made on the Spanish style—*i. e.*, similar to those used in Mexico, with high, narrow heels and toe somewhat pointed—there would be a great many more imported, because of the superior work of American tanneries, their strong make, and durability. The shoes made in Paraguay are not very good.

The prices range from \$1.50 to \$7 gold, and purchases are often made, because the sand and rocks cut the shoes very soon. For importation of shoes, see table annexed.

The importation of arms is fair, in view of the population of the

country, there being no local manufactory. The importation of powder, arms, etc., last year (1897) amounted to \$12,791. (See table.)

Nearly all the powder is used for sport; very little is imported for blasting or mining purposes. Of black powder, some 5 tons per annum are imported. About 2 tons of the smokeless powder have been introduced, but with unsatisfactory results. The black sporting powder, bearing principally the three F's as brand, is sold for about 55 cents gold per pound, and is brought principally from London. The smokeless powder also comes from English manufactories, and is sold for about \$2 a kilogram (2.2046 pounds).

Shot, mostly from England, sells at 10 cents per pound.

Shotguns with ramrods are sold largely and almost exclusively for the country. They come chiefly from Belgium and Germany. They are sold for \$3, \$4, \$5, and \$6—so cheaply that the good American shotguns can not compete.

The cartridges from the Eley's Solid Drawn Cartridge Company, London, have a large sale. The brand from Metallic Cartridge Company, Bridgeport, Conn., containing smokeless powder, is popular.

The revolvers are the Smith & Wesson, also Colt's, from the United States.

There are only two principal dealers in Asuncion, namely, Otto Zinnert and Victor Rosch.

The duty on bullets, ramrods, and caps is 25 per cent; on cartridges, 25 per cent; swords, 25 per cent; powder, 10 per cent; revolvers, 50 per cent; guns, 25 and 50 per cent.

I am satisfied Americans could do some business in the above line of goods if our drummers came to Paraguay.

JOHN N. RUFFIN,

ASUNCION, *November 5, 1898.*

Consul.

Imports of shoes in 1897.

Description.	Quantity.	Official value.	Argentine.		Uruguay.		Duty.
			Quantity.	Official value.	Quantity.	Official value.	
Shoes for women and children	<i>Dox. prs.</i> 77	\$563	<i>Dox. prs.</i> 41	\$347	<i>Dox. prs.</i> 36	\$216	<i>Per cent.</i> 40
Shoes for men.....	61	510	3	133	58	377	40
Slippers.....	8	28	.....	.....	8	28	50
Total .....	.....	1,101	.....	480	.....	621	.....

Imports of arms in 1897.

Description.	Quantity.	Official value.	Argentine.		Uruguay.		Duty.
			Quantity.	Official value.	Quantity.	Official value.	
							<i>Per cent.</i>
Lead bullets.....kilograms...	3,063	\$358	2,700	\$314	363	\$14	25
Ramrods.....dozen...	8	11			8	11	25
Caps.....kilograms...	524	524	357	357	167	167	25
Rifles of all classes.number...	96	439	29	131	67	308	50
Cartridges.....kilograms...	4,103	2,809	2,805	2,163	1,298	736	25
Barrels.....gross...	94	39	94	39			25
Breeches.....number...	5	5	5	5			25
Guns.....do.....	750	3,143	590	2,119	168	1,024	25 to 50
Swords.....do.....	7	31	7	31			25
Wads.....kilograms...	189	303	169	271	20	32	50
Cartridge machines.dozen...	7	42	7	42			25
Ammunition for hunting, kilograms.....	23,538	2,354	19,870	1,987	3,668	367	10
Pistols.....number...	151	265	20	12	131	253	50
Sporting and gun powder, kilograms.....	4,495	1,349	4,495	1,349			10
Revolvers.....number...	293	764	111	322	182	442	50
Worm for drawing wads, dozen.....	8	4			8	4	25
Police whistles.....dozen...	229	139	216	131	13	8	25
Sword sheaths.....number...	1	1	1	1			25
Other.....		121		20		101	50
Total.....		12,791		9,294		3,497	

IMPORTATION OF BEER INTO MEXICO.

In reply to a brewing company in the West,* Consul Kindrick, of Ciudad Juarez, writes as follows, under date of December 10, 1898:

Until within the past few years, beer has not been in favor in Mexico. It has not been very long since it first found a market in the Republic. Formerly, the Mexicans drank only the white wines and clarets from Europe and cognac and their native liquors, such as mescal, tequilla, and pulque. Pulque is the juice of the maguey plant. It is fermented for twenty-four hours, but is unfit to drink after being a day old. Tequilla and mescal are similar, both liquors being distilled from the maguey plant. In appearance, they resemble gin. American whisky is now taking the place of cognac, and American beer is supplanting tequilla as a popular beverage.

Within the last few years, extensive breweries have been established in different cities. The breweries at Monterey and Chihuahua have proven so successful that the owners of these plants have already planned their enlargement and increased capacity. Beer can be had on tap at the most remote saloons in the Republic.

Beer is also imported in large quantities, and the imported beer

*To whom the consul's letter has been forwarded.

is distributed throughout the Republic. At the custom-house in this city during the past fiscal year, beer to the value of \$10,500 was imported. Most of that which entered at the custom-house in this city came from St. Louis. The breweries in that city have practically the control of this market. Beer is imported in kegs and also in bottles. It comes packed both in barrels and cases, and is usually put up in quart bottles.

Lager beer imported from the United States is subject to an import tax. The tariff duties on bottled beer, with no allowance for waste or breakage, is 20 cents in Mexican money per net kilogram. A kilogram is equal to $2\frac{1}{4}$ pounds, and the duty on $2\frac{1}{4}$ pounds in United States money would be 9 cents, calculating the rate of exchange at 45 cents. The duty on beer in barrels per net kilogram is 8 cents Mexican, a trifle less than 4 cents in our currency. Beer consumed in the Free Zone is subject to a duty of $18\frac{1}{2}$ per cent of the whole tariff.

Beer is purchased wholesale in this city on about the same conditions as it is sold to purchasers in the United States. The shipper is not responsible for waste and breakage.

The wholesale price of beer varies according to the keenness of competition between the different breweries. The beverage is sold over the bar in this city for 10 cents per glass in Mexican money, or 50 cents for a quart bottle. In-trade like this, American money counts two for one, and, instead of paying 10 cents Mexican, 5 cents in American money is acceptable for a glass of beer and 25 cents American for a quart bottle. The various brands of beer, whether made in Mexico or the United States, retail at the same price in the saloons. Two trunk lines of railway—the Texas and Pacific and the Atchison, Topeka and Santa Fé—connect with the Mexican Central at this place. Ketelsen & Degetau and Dieter & Sauer are the leading wholesale dealers in Ciudad Juarez.

DUTIES IN SALVADOR.

Vice-Consul Baruch sends from San Salvador, November 24, 1898, translations of recent decrees by the Provisional President of the Republic of Salvador, as follows:

DECREE OF NOVEMBER 21, 1898.

The exportation of coffee of any nature whatever is declared free of all duty and tax.

DECREE OF NOVEMBER 21, 1898.

Considering that the deduction of the duties on foreign merchandise decreed under date of the 20th of May of the current year has injured to a great measure all the commerce of the Republic by the heavy stocks that it had; that said disposition has not produced any benefit in favor of the people, because the mer-

chants have not been able to dispose of said stocks at a price less than their cost; and that this same circumstance has impeded them from ordering anew, which has resulted in positive injury to the income of the nation, it is decreed:

ARTICLE 1. From the publication of the present decree, the custom-houses of the Republic will collect 50 per cent upon duties in silver money, instead of the 20 per cent gold established; 6 per cent in bonds of the French debt; and 30 per cent in silver, in place of the 12 per cent gold in favor of the corporations.

ART. 2. The duties on foreign merchandise will be increased 40 per cent above the actual duty, to be paid in the following manner: Ten per cent from the 1st of December next; 10 per cent from the 1st of January next; 10 per cent from the 1st of February next; 10 per cent from the 1st of March next.

ART. 3. The dates under which the merchandise is presented for registry will serve as a base for the collection of the duties, in conformity with the epochs above mentioned.

ART. 4. All the established duties remain in force, and will be collected from the 1st of December in the respective bonds in circulation.

ART. 5. The decrees dated May 20 and September 6 of the present year, and the remaining dispositions which oppose the present decree, are abolished

NEW DUTIES IN ANTIGUA.

Much to the surprise, and in many cases the consternation, of the local business community, wholesale and retail, the legislative council, at a secret session held on Monday, November 28, adopted a revised revenue-aid ordinance that increases materially the import duties on certain products. The articles affected and the increase in duties are as follows:

Articles.	Unit.	Former duty.		New duty.	
		s. d.		s. d.	
Flour of wheat.....	Per barrel.....	5 0	\$1.20	6 0	\$1.44
Bread and biscuit.....	.....do.....	1 0	.24	2 0	.48
Salted and dried fish.....	Per 100 pounds...	1 6	.36	2 0	.48
Brandy.....	Gallon.....	5 0	1.20	7 6	1.80
Cordials, liqueurs.....	.....do.....	5 0	1.20	7 6	1.80
Gin.....	.....do.....	4 2	1.00	7 6	1.80
Whisky.....	.....do.....	4 6	1.08	7 6	1.80

After the passage of the ordinance, an additional clause was adopted declaring the new duties in effect from the opening of the treasury department on the following (Tuesday) morning, and as a consequence local importers, who had stocked up heavily with flour, breadstuffs, and liquors, all held in bond, found themselves suddenly mulcted in additional tolls to a total of many thousands of dollars. The figures given in the above table, moreover, do not fully represent the increased outlay to importers, as there is a "trade tax" of $33\frac{1}{3}$ per cent levied in addition to the actual duty. Hence the

increase upon flour is in reality 32 cents per barrel, upon breadstuffs 32 cents, and so on in proportion.

In the matter of liquors and cordials, the imports from the United States are but nominal, while Canada supplies the bulk of the dried and salted fish consumed in Antigua. So far as concerns flour and breadstuffs, however, the new tariff is likely to bear heavily upon the trade within the United States, whence the entire supply of these products is derived. The extent of this trade may be gathered from a glance at the following figures:

Imports from the United States.

Year.	Flour of wheat.		Bread and breadstuffs.	
	Quantity.	Value.	Quantity.	Value.
	<i>Barrels.</i>		<i>Barrels.</i>	
1896.....	16,303	\$60,686.40	4,413	\$8,121.60
1897.....	13,457	59,768.64	6,657	14,229.10
1898 (6 months).....		36,903.50		8,624.36

It is the opinion of large importers that the increased imposts will result in a serious falling off in the demand. One of the largest bakers on the island, whose imports of Minnesota flour never run below 200 barrels monthly, says:

The advance could scarcely come at a worse time. As the world knows through the English parliamentary debates, our people are already existing only hand to mouth. On the other hand, the bakers have been making but a bare margin of profit. The new duties mean one of two things—a higher priced loaf or a smaller loaf. Our people can stand neither alternative; so they will subsist more largely than ever on vegetables and fruits. Hence they will buy less bread, the bakers will bake less, and the demand for American flour will fall off in proportion. The same rule applies to breadstuffs.

It may be noted that the act is a limited one, its provisions extending only to December 31, 1899.

ANTIGUA, *November 30, 1898.*

HENRY M. HUNT,
Consul.

SHIPMENTS OF VENEZUELAN CATTLE TO CUBA.

Consul Ellsworth writes from Puerto Cabello, December 10, 1898:

Since my report of November 3, 1898,* steamers have left this port loaded with 3,701 cattle for Cuban market. Messrs. Silveria & Co., Habana, Cuba, through their agents, Nadle & Roca, have closed another contract with responsible cattle owners in the State of

*See CONSULAR REPORTS No. 220 (January, 1898), p. 133.

Miranda, Venezuela, for 24,000 head of cattle, which makes the stock now ready for shipment about 36,000 head.

The cattle of this firm are to be delivered at a small station on the Caracas and Valencia Railway, near Valencia, and will be shipped from there to this port via the Caracas and Valencia and Puerto Cabello and Valencia railways.

The old reliable house of A. Braschi & Sons has entered this Cuban cattle trade and will ship to Cienfuegos, Santiago de Cuba, and other ports in Cuba several cargoes of selected stock within the next thirty days. The senior of the firm of Braschi & Sons is consul for Italy at this port, and the firm has branch houses in Barquisimeto and Valencia, which are directed by the principal house at this port.

I have been informed that the house of Boulton (owners of the Red D Line of American steamers) is contemplating taking a hand in this Cuban cattle trade if they can secure the necessary steamers, but can not, at this writing, give more information as to the extent of their operations.

I am glad to report that the way of loading the cattle into steamers by hoisting them with rope and pulley, the pulley hooked into a rope around the base of the horns of the animal, allowing the whole weight to be held up by the horns, has been abandoned. All the steamers now used in the cattle trade have ports large enough to allow of driving the cattle through them.

The first steamers sent to Cuba lost in transit from ten to thirty-eight head, and I think the cause of the death of the majority was the injuries they received through being loaded in the manner above described. Since the loading by hoisting was abandoned, the loss of cattle in transit has been very small.

CANADA'S PREFERENTIAL TARIFF AND IMPORTS FROM GREAT BRITAIN.

I inclose extracts from the Toronto Mail and Empire of the 24th of November, 1898, showing the effect on Canadian imports of the 25 per cent preference to Great Britain during the four months ended October 31, 1898.

PALMERSTON, *December 3, 1898.*

LOTON S. HUNT,
Commercial Agent.

EFFECT OF THE 25 PER CENT PREFERENCE.

The department of trade and commerce has compiled from the British Board of Trade returns a statement showing the export of goods from the United Kingdom to the Dominion for the month of October. Taking the four months ended October

31, during which the full preference of 25 per cent has been in force, the importations of British goods appear to have slightly increased on the bulk of the list, as compared with the corresponding periods of 1896 and 1897. For instance, exports to Canada of spirits have increased from \$193,103 and \$230,951 for the four months of 1896 and 1897, respectively, to \$265,076 in 1898. Wool, from \$7,659 and \$92,388, has fallen to \$47,225. Gray cotton remains at about \$13,000; bleached increased from \$53,122 and \$44,325 to \$81,422; printed, from \$167,267 and \$136,183 to \$184,966; dyed cottons, from \$347,964 and \$381,463 to \$520,786; linen manufactures, from \$200,632 and \$201,751 to \$286,441; worsted goods, from \$919,503 and \$1,052,325 to \$1,094,658; carpets, from \$165,285 and \$190,583 to \$293,284.

In the exportation of iron and steel and manufactures thereof there has, however, been a falling off rather than an increase, notwithstanding the operation of the full preference of 25 per cent; while from the United States our imports have noticeably increased. For instance, we received from Britain during the first four months of the past fiscal year but \$17,617 worth, and during the corresponding period of the present year \$18,014, as against \$79,509 during the four months of 1896. During the latter period, also, railroad iron and steel exported to Canada from the United Kingdom was valued at \$605,577; during the four months of 1897, the export was \$124,061, and during the four months ending October 31, only \$50,306.

These and similar decreases more than offset the general tendency to increased export in the lines of goods above mentioned.

The statement is made unofficially, in explanation of this showing, that the disposition to avail of the benefits of the preferential cut is offset by a tendency on the part of the Canadian importers to await the outcome of the present reciprocity negotiations at Washington before transferring orders from the United States to British houses. As for the failure of the preferential tariff to encourage the importation of British as against United States iron and steel, it is candidly enough admitted that, even with the 25 per cent advantage, it would be impossible for British manufacturers to compete with the Americans in Canadian markets.

DECREASE IN CANADIAN-BRITISH CATTLE TRADE.

The British market for Canadian cattle has not been satisfactory this season to Canadian shippers, though freight rates and fodder have been cheaper. The total number of cattle shipped was 101,281 head, of which 5,719 were United States stock shipped in bond. The total number of cattle is 20,130 less than last season.

I have been informed that the average cost is \$5 per head lower, making a total value of \$5,570,455. Ocean freight, at an average of \$8.75 per head, amounts to \$886,208.75; while the railway charges were \$3.25 per head, or a total of \$329,163.25.

It is estimated the amount of hay used on ocean voyages during the season was 14,154 tons, at \$8 per ton, making a total of \$113,232. Of feed, 3,654 tons, at \$20 per ton, were also used, amounting to \$73,080. Fitting up the ships amounted to \$165,634; insurance, \$99,094; care at yards, \$49,524; loading fees, \$51,784; attendance, \$68,820; or

a grand total expenditure for the season of \$7,406,995, showing a decrease of \$1,917,854, compared with 1897.

It is pointed out that, apart from the poor market, one of the reasons for the falling off in shipments was the fact that the United States buyers have purchased quite heavily in Canadian markets, the stock being shipped via American ports.

It also appears from official statistics that the sheep trade is in the same bad condition. The shipments for the season were 34,991 head, showing a decrease of 26,263, as compared with 1897, and a decrease of 45,680 from 1896. The value, at an average price of \$5 per head, amounted to \$174,955; ocean freight, \$34,991; insurance, \$87.47. This branch of the live-stock trade has fallen away fully 75 per cent within the past three years.

The export of horses for the past season also shows a decrease of about 50 per cent, as compared with 1897. The total shipments for the season of 1898 amounted to 5,822 head, showing a decrease of 4,226, compared with 1897, and of 4,203 from 1896.

GUSTAVE BEUTELSPACHER,

MONCTON, *December 6, 1898.*

Commercial Agent.

CANADIAN-BRITISH STEAMSHIP COMPANY.

Recent newspaper articles in regard to the formation of a new trans-Atlantic steamship company, to have its western terminus at Paspebiac, have led me to make a personal investigation of the matter, the results of which I give below.

The Bay of Chaleurs Railway was originally intended to be built from Metapedia, a station on the Intercolonial Railway, to Gaspé Basin, on the Bay of Chaleurs, to keep the Gaspé peninsula in communication with the rest of Canada during the winter months. Early in the history of this railway, a charter was also obtained by the Atlantic and Lake Superior Railroad Company to build an independent road from Metapedia to Gaspé Basin. This charter has not been acted upon, because the latter company seems to have obtained control of the portion of the Bay of Chaleurs road which has been completed and operated to New Carlisle, within 3 miles of Paspebiac, on Gaspé Basin, and it is to be extended to Paspebiac as rapidly as possible.

The Canadian Steamship Company, controlled by the Great Western Railway Company, of England, is now engaged in the construction of a large wharf at Paspebiac, which is to be 1,600 feet long, with an elbow 200 feet wide at the end. It is protected from

all winds. Four hundred men are engaged in the extension of the railway from New Carlisle to Paspebiac.

The Atlantic and Lake Superior Railroad seems to have finally gained a connection between the Lake Superior district and the Atlantic seaboard at Paspebiac. Some time ago, it was stated that one of its objects was to secure the output of Western grain by an all-Canadian route. Paspebiac is well situated for the purpose, on account of its being much nearer to Europe than the inland ports of Quebec and Montreal, and because it will be open at least two months longer in the winter and much earlier in the spring than the St. Lawrence cities, besides cutting off about 600 miles of difficult navigation. This advantage will admit of the shipment of a larger quantity of Western grain and allow the Western farmers a longer season in which to market their harvest.

The attached newspaper clippings will show that the Great Western Railway Company intends to run a line of steamers from Milford Haven, Wales, to Paspebiac, beginning December 7 of the present year.

Though I do not believe the harbor of Paspebiac can be kept open all the year, yet the proposed route has a great advantage over the St. Lawrence route, in that it can be used certainly as late as the 15th of January and again as early as the 15th of April, if not by the 1st, gaining three months of open navigation out of the year.

ALMAR F. DICKSON,

GASPÉ BASIN, *November 29, 1898.*

Consul.

NEW LINE STARTED.

The cablegrams from the other side indicating the formation of a new trans-Atlantic steamship company are now fully confirmed.

The accredited representative of the Canadian Steamship Company, Limited, is now at the Hall, in the person of Capt. Montague Yates, a native of Prince Edward Island.

The project, he said, was one which would contribute in no small degree to the development of trade between the Dominion of Canada and the United Kingdom.

"For a good many years," Captain Yates went on, "the Great Western Railway Company of England, one of the most powerful and wealthy corporations of the country, has been seeking to establish a trans-Atlantic connection with their great railway system at Milford Haven; but their efforts have always been frustrated by the all-powerful influence of Liverpool and Manchester. This, however, could not go on forever, and finally friends of the Great Western Railway Company decided to organize a steamship service of their own. This has been done, and the name of the new corporation is the Canadian Steamship Company, Limited, and the service will be between Milford Haven and Paspebiac, at the mouth of the Baie des Chaleurs."

Captain Yates says they expect to shorten the sea voyage by two days; and

being asked about the speed of the Canadian Steamship Company's boats, he replied that the *Paspebiac* was a $15\frac{1}{4}$ -knot steamer and was built by the Pacific Steam Navigation Company. The *Gaspesia* is 3,900 tons, and is especially adapted for carrying passengers. The next steamer to be sent over by the company will register 6,000 tons, and will be followed every week by equally good boats.

BAIE DES CHALEURS RAILWAY.

Very active preparations are going on for the perfecting of the scheme to make Paspebiac, on the Baie des Chaleurs, an ocean-steamship port, in opposition to the ports of the St. Lawrence. The construction of a large pier, which runs out into deep water for 1,600 feet from the bar at Paspebiac, is being vigorously proceeded with. It will accommodate vessels of the largest tonnage, and will have at low water a depth of 36 feet. The intention is to complete the pier by December, and there is every reason to believe that the Baie des Chaleurs Railway will reach Paspebiac by that time. It is now within 3 miles of it, and contractors are engaged running that part of the cliff between New Carlisle and Paspebiac and preparing for bridging the Bonaventure River in iron. The Baie des Chaleurs Railway connects with the Intercolonial at Metapedia, which is nine hours from Quebec.

MERCHANT MARINE OF FRANCE.

Something over a year ago, an extraparliamentary commission was appointed to study and report upon the present condition of the French commercial marine and to recommend legislation. The report of the commission may be expected early in 1899. The discussions, as printed in the *Moniteur Maritime*, cover 149 quarto pages. I have read them very carefully and condense in this report many points which may be found useful to people interested in this subject in the United States.

Most of the shipyards of France are occupied with repair work, and build only ships of small tonnage; some build only dredges and small craft for coasting. For the building of large merchant ships, there are yards in France as follows:

- (1) Those of the Messageries Maritimes, which do work only on their own ships.
- (2) Those of the Compagnie Générale Transatlantique, at St. Nazaire, which work chiefly on its own steamers, and have thus far built only one war ship and one sailing ship.
- (3) At Bordeaux, the shipyards of the Gironde, which seem disposed to make a specialty of war ships.
- (4) At Nancy, a yard which builds sailing ships of a maximum of 3,000 tons and small steamships.
- (5) At Paris and in the Department of the Seine and at Lyons there are yards which appear to confine themselves to special work

and are not disposed to embark in the construction of large merchant ships.

(6) At Rouen, the shipyards of Normandy, which have been established since 1893. One steamship and a number of sailing ships have been built there during the past few years.

(7) Two large shipbuilding companies, the Forge shipyards of the Mediterranean and the shops and yards of the Loire. Each owns two important navy yards. These are the principal builders of merchant ships in France.

The following is a statement of the number of ships of war built for France and foreign countries, in the French shipyards, from 1878 to 1896, inclusive:

Year.	Ships of war.		Merchant ships.	
	Displacement.	Horse-power.	Displacement.	Horse-power.
	Tons.		Tons.	
1878-1880.....	10,541	18,590	8,562	(*)
1881-1892.....	15,194	44,243	29,289	9,645
1893-1896.....	19,192	79,310	25,985	7,050

* Not given.

The general total during the period from 1878 to 1896 is:

Description.	Tonnage.	Horsepower.
Ships of war.....	290,722	903,960
Merchant ships.....	481,095	143,950

Le Temps, a newspaper of Paris, declares the decadence of the merchant marine of France to be a manifest fact, adding:

One must be blind not to perceive that the time has come to remedy the evil.
* * * In 1896, 203 French ships, with 303,600 tons burden, were in the foreign trade; in 1897, the number had fallen to 191 ships with 300,000 tons. Returns are not in yet for 1898.

Following will be found extracts from the speeches made and the papers read by the commission:

Only 25 per cent of the ships that enter and leave our port carry our flag.

Last year, France was at the head in the list of ships passing through the Suez Canal. We are now fourth: England, 2,161 ships; Germany, 322; Italy, 230; France, 218; Holland, 200.

The subsidies granted by the law of 1893 caused only a temporary activity in shipbuilding. France, since that time, has produced but 4 steamers, with 13,313 tons burden.

The reason for this, or rather the two reasons for it, according to the shipowners, are, in the first place, the high cost of French ships—from 50 to 60 per cent more than English; second, the slowness in building and delivering them.

The English, Germans, and Americans never fail to aid, in various ways, their merchant marine. In addition to official subsidies, more or less disguised, there exist, in England especially, and in all the English possessions, port corporations and syndicates of shipowners, a system of cooperation and discrimination, the object of which is to protect British maritime commerce against all foreign competition by skillful and timely changes of rates and the remission of freight altogether to their own countrymen, or sometimes to foreign houses with whom it is of temporary importance to be conciliatory.

A study of comparative statistics of the commercial marine of various countries for the past ten years shows that in Great Britain there was an increase of 33 per cent; in Germany, 107 per cent; Spain, 30 per cent; Italy, 68 per cent; Holland, 57 per cent; in France, a loss of 1 per cent.

The ports of France should be improved, subsidies continued for ten years, and canals improved and new ones opened.

It is believed that the presence of Englishmen and Germans in other nations is favorable to the foreign trade of England and Germany with those nations.

Merchandise sent from Lyons to Cochin China, a French protectorate, is shipped from Antwerp, instead of being sent from French ports. Freight is sent by way of Antwerp and Hamburg on account of lower rates. Freight in France are much higher than in foreign countries. Shippers, therefore, prefer foreign ships.

Young men must be induced to go into maritime careers; capital must be attracted into that business; the methods of the English must be studied.

The following sentences are translated from an article by M. Berard, in the *Moniteur Maritime* of August 21, 1898:

There has been, in some cases, a difference of 83 per cent in the price of building ships in England and France in favor of the former country. I can not insist too strongly upon the fact that the ship built in France for 2,000,000 francs will not realize 1 centime more from its business than if built in England for 1,000,000 francs. It takes twice as much time to construct a ship in France as in England. I say twice as much, because I do not wish to exaggerate. It requires eighteen or twenty-four months to construct a steamship of 4,000 tons and ordinary swiftmess. That is the same time the English or Germans require to build a ship of 12,000 tons with 21 knots speed.

My company asked several shipbuilders for a price and the length of time for a sailing ship of 3,000 tons burden. We intended to build two. Only one shipbuilder was disposed to examine our proposition. You can see to what competition is reduced among shipbuilders.

The writer proceeded to explain, in something over a column, that the one company that answered his bid imposed such vexatious conditions that he was obliged to abandon the idea of building. He added that his company paid, a few years ago, \$15,811 for new boilers, including the work of taking out the old ones and putting in the new. They could have had it done in England for half that sum.

In the session reported in the *Moniteur Maritime* of August 7, M. Seigfried, in a paper which filled two pages of the *Moniteur*, said:

Shippers are the only business men in France who can import their machinery and tools without paying a duty. Their industry is more protected than any in

France. They order their ships in England and bring them into France without paying duty. Up to the present time, our situation has been such that it has been impossible to create any shipyard without loss, or even without seeing it disappear.

The *Moniteur Maritime* of December 4, 1898, gave a two-page report of the session of the commission of October 29, from which I translate:

The construction of sailing ships in France is, according to M. Duprat, abnormal. While we, during last September, built sailing ships aggregating 25,600 tons, England's total was 2,693 and Germany's 150. We built steamships aggregating 50,000 tons, while the figures for England and Germany were 1,360,000 and 144,000, respectively.

M. Estier thought it would be an advantage to the ocean-carrying interests if all freight, or the bulk of it, could be concentrated at Havre, making that port what Hamburg is to Germany and Liverpool to England.

M. Bernard proposed the establishment of a line to run to Para and Manaos, touching at Bordeaux and Lisbon. M. Duprat thought that a contract with the Government for fifteen years would be indispensable to sustain such a line, for English-syndicated companies would make any sacrifice to destroy French competition.

The opinions of a number of chambers of commerce were read before the commission. Many asked for a flag tax to be imposed on all goods not brought in French ships. One chamber asks: "Would not this be the complement to that granted to all our industries against those of foreign countries?" Another chamber expresses the opinion that "the law must be so framed that no products of our colonies and protectorates can come except in French ships." One chamber says: "In France, our population diminishes; there is too much comfort here; our people will not emigrate, and they lack individual initiative." These words were received with applause and with the remark: "That is true." Other chambers said: "We need cheaper rates to the sea; there are too many ports in France; steamers depart from them too seldom; we can get better terms by shipping to Antwerp or Amsterdam; every nation around us is making progress; we alone stand still, we alone go backwards."

The French minister of commercial marine recently published an interesting statement of the sums given by France in subsidies to merchant vessels, under the law of 1893, for a period of fifty-nine months. It contains 350 quarto pages and is composed entirely of tables of figures. The names of the vessels subsidized, the number of miles navigated by each, the tonnage, and the amount paid are stated. The following are some of the items condensed from this report:

One hundred and seventy-two steamships, making long voyages (*au long cours*), with an aggregate tonnage of 467,726 tons, received subsidies amounting to \$6,200,000; 314 steamships, engaged in coasting trade (between Atlantic and Mediterranean ports), with an aggregate tonnage of 644,986 tons, received \$1,450,954.41; 330 sailing ships, long voyages, with an aggregate tonnage of 204,187 tons, received \$2,095,505.45; 289 sailing ships, in the coasting trade, aggregate tonnage of 149,955 tons, received \$38,322.18.

The French commercial marine which enjoyed the benefits of this bounty consisted, at the end of 1897, of 396 wooden ships, 445 iron, and 125 steel—among which the steamships carry 784,400 tons; the sailing ships, 264,309 tons.

Some of the trans-Atlantic steamers received as much as \$115,300. The smallest sum accorded—to a sailing ship—was \$2.58.

JOHN C. COVERT,
Consul.

LYONS, *December 14, 1898.*

BELGIAN MERCHANT MARINE.

Consul-General Lincoln, of Antwerp, transmits, under date of November 22, an article containing the suggestions of a well-known Belgian authority looking to the increase of the Belgian merchant marine. An abridgment of the article reads as follows:

The revolution resulting from the application of steam power to vessels was of such rapid development that navigation in sailing vessels was almost crushed by the suddenness of the blow. Belgium almost entirely abandoned sailing vessels, and the equipment of steamers suffered in consequence. This put a stop to a very considerable source of revenue for Belgian commerce. This fact seems at last to have been understood in Belgium, and for some time past serious efforts have been made to create a marine. Efforts have likewise been made of late to create a corps of marine engineers.

Nevertheless, the ranks of Belgian marine officers continue to be recruited with great difficulty, the number of suitable candidates being so limited. The field of activity of Belgian sailors is no less restricted, and what still further aggravates the situation is the easy manner in which marine officers are able to find lucrative positions on land. Much perseverance will therefore be required to add to the numerous departments of Belgian industrial activity a merchant marine, which everybody feels to be necessary since the fortunate impulse given to colonial enterprise under the patronage of the Sovereign.

As Belgium had either abandoned the fitting out of vessels or had failed to continue to improve her material, she was promptly distanced by other people. Discouraged, she has seen her capital turn away from maritime enterprises and her fleet reduced almost to nothing. It is true that the Belgians have found, in other directions, an outlet for their energy, as well as sufficient means for developing their capital. But, limited to the narrow territory of the Kingdom, having no suitable chances for industrial expansion at home and hindered by protective tariffs abroad, they have been very little inclined to compete with foreigners until the past few years. Instead of reaping greater profits by direct trade with distant countries, they have preferred the less remunerative but easier commerce with neighboring nations, who, serving at first as intermediaries, became later on the most powerful competitors of the Belgians, who were thus on the road to an economic crisis.

The King has, by his great foresight, been able to overcome the timidity and indolence of his subjects, and Belgian industry during recent years has taken a step forward and founded branch houses in distant countries. The Kongo Free State prospers, and Belgian enterprises exist in various points of the globe.

England continues to be mistress of the seas, and her vessels make millions in Antwerp. Other maritime countries have resumed their former activity. The most striking factor in this order of things is the appearance of Germany as a great maritime nation, following closely not only upon her political evolution, but also upon her industrial development, which has been immense. Germany has not been slow to protect her merchant navy. England does as much and is ever preparing to take measures to encourage her sailing vessels, for without these it is certain that good sailors can not be formed. Other countries also make great sacrifices for their merchant marine. France expends a considerable sum of money annually on navigation bounties. Even the little state of Finland, for the purpose of recruiting her merchant marine—destroyed to a great extent by the transformation of sailing vessels into steamers—gives substantial assistance to certain steamship companies by lending them for a number of years, without interest, half of the capital which they require. Two million dollars have in this manner been given to Finnish maritime companies.

The maintenance of sailing vessels is indispensable, and when sailing vessels can no longer compete with steamers they will have to be subsidized. Besides what England does to encourage the recruiting of sailors and the bounties granted in France to sailing vessels as well as to steamers, there are certain shipowners who, side by side with steam fleets, maintain as an indispensable auxiliary a flotilla of sailing vessels. Such is the case in Finland. The Norwegians, who have carried the art of shipbuilding to an even higher degree than the English themselves, have been the last to transform their vessels. To-day, many steamers belong to English capitalists who find it more advantageous to trust their vessels to Norwegian sailors than to their own countrymen. The Norwegians buy sailing vessels built of iron or steel. They are of a considerable tonnage and have already been used a few years. These vessels they buy at favorable prices, and their insurance companies (as in Italy) insure them under reasonable conditions. They manage and sail them in an economical manner and make them render such a dividend that, notwithstanding the small population of the country, Norway maintains herself as the third in rank among maritime nations for sailing vessels, fifth for steamers, and fourth for total tonnage.

The English are generally the builders of these sailing vessels. They navigate them under less economical conditions than the Norwegians, but, as their material is more perfected and newer, they obtain, at higher freight rates, choice cargoes.

Navigation by sailing vessels has been kept up notwithstanding the opening of the Suez Canal. As one of the indispensable necessities of to-day, it has been maintained by first-class vessels, side by side with steamships, particularly in the long voyages to Australia and the Far East and the west coast of America. The inferior vessels bought at low rates by the Scandinavians always find a lucrative business in the transportation of building wood from Canada and Florida. Certain vessels will always be used under sail, notwithstanding all the progress made by machinery, simply by reason of the law of a wise economy and because sailing craft can only be done away with when the sailor has himself disappeared. The axiom must be repeated: "No marine without sailors; no good sailors without sailing vessels."

The principle that merchandise follows the flag has long since been recognized. It has been energetically applied by the Germans, from the time when the English law on trade-marks no longer permitted the sale of foreign products as English products. Mistress of the sea, British industry thought in this manner to give a fatal blow to German industry. But the latter rose up by creating a merchant navy, henceforth powerful, and which, encouraged by the State, carried far and wide the products of the great German nation. The renown of German industry has been

brought to such a point that England, recognizing the uselessness of these protective measures, has recently modified the law.

Thanks to the King, Belgium has a colony. As for the marine, Belgium can create it without for a moment ceasing to be a free trading country. The assistance which the Belgians intend to ask from the Government will only be required during the time necessary to prove to Belgian capital that the industry of shipbuilding can exist by itself.

What prevents the earning of a reasonable dividend is the redemption fund and the high rate of insurance. It is insurance which ruins small shipowners. Therefore, English shipowners sell their vessels as soon as the demands of insurance companies are too excessive—that is, after a few years of navigation. These vessels are then in excellent condition. They can perfectly well continue to cross the seas for several years longer, but the insurance premium makes them more expensive to sail than before. The vessels are therefore sold. The season is propitious for buying not only excellent secondhand iron vessels suitable for trans-Atlantic navigation, but others as good as new. When these sales take place, Scandinavians and even Italians come to buy vessels, out of which, owing to their economical manner of navigating them, they obtain greater profits than the English owners.

In this manner, a Belgian merchant marine could easily be formed, provided the State were willing to help in the measures suggested above.

SCHOOL FOR MERCHANT MARINE IN RUSSIA.

I transmit a translation of the regulations, established by imperial authority, for the management of an institution recently organized in this city, which has for its object the training of young men in the theory and practice of navigation, in order that they may become competent to take command as masters and mates on Russian merchant vessels.

The studies make of those who successfully pass the course highly educated men, familiar with the English, French, or German languages, physics, mathematics, theoretical mechanics, commerce, political economy, bookkeeping, physical geography, nautical astronomy, shipbuilding, commercial geography, law, hygiene, etc.

I have thought it advisable to bring the knowledge of this establishment to the attention of the Department at this particular time, for the reason that it would, in my opinion, be highly advantageous to our future commercial and merchant-marine interests if similar institutions could be successfully established throughout the United States, either in connection with educational institutions or as separate establishments.

As we shall furnish the world with food and manufactured goods, both patriotism and profit demand that these products be carried in American ships, and that these ships be manned and officered by competent Americans.

We move quickly in the United States, and it requires but a slight

knowledge of our people to predict that in ten years' time we shall have the largest merchant fleet afloat.

I have been told by Americans who have traveled much in European and Asiatic waters that an American ship is rarely met with, and certainly my own experience as consul at Odessa during the past thirteen years confirms the statement. I have never on a single occasion seen an American ship in the Odessa harbor, and yet, during the year 1897, the official returns show that 1,192 steamers and 34 sailing vessels, having an aggregate tonnage of 1,761,339 registered tons, entered this harbor. Of these, 663 steamers, having a registered tonnage of 1,050,028 tons, were British.

Under the circumstances, it is not surprising that the Russian Government is now admitting ships for the Russian foreign and domestic trade free of duty, and is also establishing and endowing marine schools for its coming merchant-marine officers.

THOS. E. HEENAN,

ODESSA, *December 2, 1898.*

Consul.

[Translation.]

STATUTES OF THE CLASSES OF MERCANTILE NAVIGATION AT THE ODESSA COMMERCIAL SCHOOL.

(1) The object of these classes of mercantile navigation at the Odessa Commercial School is to give to young men who are preparing themselves to perform the duties of ship masters and mates on board of trading merchant vessels a corresponding theoretical and practical education.

(2) The classes are under the care of the department of trade and manufacture of the Ministry of Finance.

(3) The revenue for the support of these classes consists of (a) sums given by the Government for their maintenance according to the statutes; (b) annual subsidies from the municipality of Odessa, out of the sums received from the tax levied on exports; (c) subsidies from steam navigation and from other companies; and (d) payments by students for their instruction.

Remark.—The sums received by virtue of b and d form the special means of revenue of the classes, and are disbursed for their maintenance in addition to the sums granted by statutes; so that the payment for the instruction is exclusively applied to such expenses in connection with the teaching as have not been provided for by the statutes.

(4) The course of instruction extends over three years and is subdivided into three classes.

(5) In these classes will be taught: (a) Religion; (b) Russian language and literature; (c) English; (d) French or German; (e) physics; (f) mathematics (practical calculation, planimetric spherical trigonometry); (g) theoretical mechanics; (h) commerce, with elementary particulars of political economy and bookkeeping; (i) physical geography (hydrology and meteorology); (j) navigation, with pilotage and fundamental particulars regarding deviations of compasses; (k) nautical astronomy; (l) fundamental principles regarding the construction of a ship; (m) practical sea going; (n) steamship mechanics; (o) commercial geography; (p) knowledge of cargo; (q) law; and (r) hygiene.

Remark.—The subjects enumerated in *g-r*, as well as spherical trigonometry, are considered special; the remainder relate to general instruction.

(6) During the course of education, in addition to theoretical teaching, practical instruction takes place on vessels. The superintendence of this instruction is intrusted to the captain of the training ship.

(7) Students of all conditions and religions, who are Russian subjects, are received into these classes.

(8) For admission into the classes is required: (*a*) The presentation of a certificate showing that the applicant has passed through the general course of education given in the commercial schools of the Ministry of Finance, and must pass an examination in the English language and in mathematics, to the extent of the course of instruction as given in the general classes of the Odessa Commercial School; and (*b*) the accomplishment of a trial voyage of not less than two months on board of the training ship belonging to the classes.

Remark.—Those who do not present certificates as mentioned in *a* are subjected to an examination to the extent of the course of instruction as given in the general classes of the Odessa Commercial School—in all subjects excepting chemistry. Those who have passed through five classes of a regular school or of a classical gymnasium are accepted after passing an examination—the first named in mathematics and in the English language, and in the French or German language to the extent of the course of instruction as given in the general classes of the Odessa Commercial School, and the last named, in addition to this, in physics.

(9) In connection with these classes of mercantile navigation, there may be established, with the consent of the Ministry of Finance, a boarding and lodging house for the students at the expense of such students, or on special donations for that purpose, or on the joint revenue derived from these sources.

(10) The general management of the classes of mercantile navigation is vested in the council of wardens of the Odessa Commercial School; the immediate management of the same is intrusted by them to the manager of the classes.

(11) For the purpose of participation in the discussion of matters concerning the classes of mercantile navigation, in addition to the council of wardens of the Odessa Commercial School, are added as members (*a*) the manager of the classes, (*b*) a representative from the Odessa municipality, and (*c*) representatives of the steam navigation companies and of those institutions which subsidize the classes, appointed in rotation and to the number prescribed by the Minister of Finance.

(12) The manager of the classes must accompany the students during the time they are pursuing their practical studies on the training ship at sea, for the purpose of watching their progress and morality, as well as for the immediate supervision of their practical studies in steersmanship. The manager of the classes may also be charged, in accordance with instructions from the council of wardens, with the command of the training ship; but in that case, the immediate guidance and supervision of the practical studies of the students must be intrusted to one of the teachers or to one of the captain's assistants (*mates*), who is selected by the manager of the classes with the consent of the council of wardens.

(13) As assistant to the manager of the classes in the execution of the duties of inspector and in the supervision of the students, one of the teachers is appointed, with the title of instructor. In the event of the illness of the manager of the classes, the instructor takes his place.

(14) The subjects of instruction in these classes of mercantile navigation are distributed among the staff of teachers who are in the Government service and those who are only engaged temporarily. The number of the first named must not exceed six, and they can only be on the following subjects and groups of subjects: (*a*) Mathematics (practical calculations, planimetric and spherical trigonometry)

and physics; (d) navigation and pilotage and fundamental particulars regarding the deviation of compasses; (e) nautical astronomy; (f) theoretical mechanics and fundamental knowledge of the theory and construction of a ship; (g) steamship mechanics, with other practical studies; and (h) English language.

Remark.—The manager of the classes of mercantile navigation, if he so desires, may instruct in one or more subjects of the course, but not more than eight hours a week.

(15) The manager of the classes, as well as the captain of the training ship, is appointed by the council of wardens from among persons who have received a special naval education and who have served either in vessels of the imperial navy or in the merchant marine.

(16) The manager of the classes, as long as he occupies that office, is reckoned as being in the fifth rank, and is confirmed in that rank after serving in the same for nine years. He may, however, be raised to this rank or grade before this term, by virtue of the general rules established for the civil service.

(17) The instructor and teachers are chosen by the manager of the classes after consultation with the council of wardens and are confirmed in their positions by the department of trade and manufacture.

(18) The teacher of religion is selected by the manager of the classes and, after receiving the recommendation of the council of wardens, is confirmed in his position by the department of trade and manufacture, with the consent of the administration of the archdiocese.

(19) As teachers of the subjects of general instruction, such persons may be appointed whose education and training qualify them for positions in regular schools.

(20) Teachers of the special subjects, other than those relating specially to naval matters, are appointed from among persons who have finished the course of education in the highest educational establishments and have received from the department of trade and manufacture certificates granting the right to teach these subjects in the commercial schools. Teachers of nautical subjects must have passed through the naval-cadet corps of the technical school of the marine department or have taught in mariners' schools of the higher grade for not less than five years. Persons who can not qualify under these conditions may be admitted to act as teachers, after reading three trial lectures in the presence of a special committee, appointed by the schools committee. Those who are successful are confirmed in their positions by the department of trade and manufacture after the expiration of one year.

(21) For the instruction in the special subjects, payment is fixed at 150 rubles (\$75) per annum, and in subjects of general education 75 rubles for a weekly lesson. The rate of payment to the teachers may be three times increased by one-fifth, but not previous to the expiration of three separate periods of five years each and on the condition that the highest rate be allowed only to two teachers.

(22) Students who have passed the full theoretical course of the classes of mercantile navigation and who have taken two practical courses are submitted to an examination, according to the programme confirmed by the Ministry of Finance, before a special committee, under the presidency of a person annually appointed by the Minister of Finance, of these members: The manager of the classes, the director of the commercial school, the teacher of that subject in which the examination takes place, the captain of the training ship (in the subjects of nautical specialty), a representative of the department of marine, a representative from the municipality of Odessa, a representative from the body of merchants elected by the exchange committee, and one member of the council of wardens elected by that council from the persons described in c, paragraph 11.

(23) After passing examinations in the theoretical course of instruction, the teachers must pursue a course of practical navigation for about three months in

vessels of the merchant navy and about two months in the training ship of the classes, after which they are submitted to an examination in practical knowledge by a committee, composing the persons named in the preceding paragraph, with the difference, however, that in matters of practical knowledge the presence of the director of the commercial school is not obligatory.

(24) Students who have successfully finished the examination in the theoretical and practical courses, provided that the aggregate duration of their training in navigation (together with experimental navigation, navigation on board commercial steamers, and the time of practical examinations) amounts to no less than seventeen months, receive a certificate that they have finished the course of education. The best students are rewarded with gold and silver medals. As regards their entering the Government service on duties which demand technical commercial knowledge, and also into higher educational establishments, those who have finished the full course of the classes of mercantile navigation enjoy the rights granted to those who have finished the course of regular schools; with regard to the acquisition of the rank of steersmen (mates) or masters of merchant vessels, they are subject to the regulations existing for that purpose (paragraphs 193-204 of commercial code; Code of Law, Vol. XI, Part II, edition 1893).

Remark.—Students who have successfully passed the examination in the theoretical course, but who were unable to complete their sea service on account of illness, will be granted all the rights enumerated in the present paragraph; but, in lieu of an attestation of having passed the full course, they will be given certificates of having passed the said examination, with a remark regarding the causes that prevented their finishing the practical course.

(25) As regards military service, the students who have finished the course enjoy the privileges granted to students of the first category of educational establishments; those who have not finished the course have the privileges of those who have passed the course in the establishments of the second category. The commencement of military service in the army is postponed for students until the age of 24 years; and those students who, after having finished the course, desire to acquire the rank of mate or of master may be granted, with the consent of the Ministers of Finance and War, the time necessary for this object.

(26) The classes of mercantile navigation at the Odessa Commercial School are authorized (a) to have a seal of the pattern established for the provincial institutions; (b) to acquire real estate and to accept all kinds of donations; (c) to order from abroad objects and means required in teaching, with the observance of paragraphs 1047 and 1048 of the customs code (General Law Code, Paragraph XI, edition 1892); and (d) to send their mails, parcels, and packages up to 1 pood (36 pounds) weight without payment of postage.

Staff of the classes of mercantile navigation attached to the commercial school.

Description.	Num-ber of per-sons.	Annual emoluments.						Class or category.		
		Salary.		Allowance.		House rent.		Total.	Of service.	Of uniform.
		Rubles.	\$618	Rubles.	\$518	Rubles.	Rubles.			
The manager of the classes.....	1	1,200		1,200				\$1,236 2,400	V	V
The manager for 5 months' allowance while at sea.								800 412		
Teachers on the staff.....	6							600	VIII	VIII
Additional remuneration to the teacher on the staff who fills the post of instructor.								300		
Clerk.....	1	500						500	IX	IX
Surgeon.....	1	400						400	VIII	VIII
Surgeon's allowance for 5 months at sea.....								460		
Remuneration of teachers according to number of annual hours of class occupation.								10,495		
Remuneration of teachers for sundry extra services.								3,100		
For schoolbooks, etc., and for additions to library.								1,030		
For the captain of the training ship.....	1	950		800	412	250	\$128	2,000	VI	VI
Captain's allowance for 5 months at sea.....								1,030		
First assistant to the captain.....	1							618		
First assistant's sea allowance (5 months).....	1							1,200		
Common seamen on training ship, barge, or steam cutter.	6							824		
Wages of second and third mates for 6 months' navigation.	2							200		
Their sea-going allowance for 5 months.....								103		
For wages of common seamen and servants while at sea.	9							1,205		
								2,340		
								1,050		
								540		
								206		
								1,275		
								656		

The same as for public instructors.

VII. As in medical service.

As for public instructors.

Remarks.—The seagoing allowance and the board wages, appropriated by virtue of these statutes to certain offices, are given to persons occupying those offices only for the time of their actual participation in the navigation of the training ship.

(2) Should the manager of the classes be charged with the command of the training ship, he will then receive the allowance which has been appropriated to the office of the captain of said vessel; the seagoing allowance appropriated to the office of the manager is in that event given to the person who will be charged with the immediate supervision of the practical studies of the students in steersmanship and navigation.

(3) Should any person be appointed to the office of captain of the training ship who has previously been in the service as first mate on that vessel during the course of no less than ten years continuously, then all this time is included in the term of service for the pension for public instruction in connection with the office of captain, with the condition, however, that he pays into the State exchequers' branch office 2 per cent of the entire remuneration received by him for the said period.

(4) Pensions are apportioned to the manager of the classes according to the rate of salary given to him, and to the captain of the training ship and the teachers on the staff at the rate of 750 rubles (\$386).

(5) Surplus over the sums allotted by these statutes for the remuneration of teachers and for the schoolbooks, etc., may not be diverted so as to cover deficits under other paragraphs.

COMMERCIAL FACILITIES OF THE RHINE VALLEY.

Mannheim, situated in the Rhine Valley, is one of the most important commercial centers in southern Germany, and it is deemed fitting to present to the attention of American exporters information respecting the transportation facilities between the seacoast and this city, as well as other inland points.

Railway communication with Hamburg, Bremen, Antwerp, and Rotterdam is very good; but for many reasons, river transportation is less injurious to various kinds of freight, at the same time giving the shipper rates varying from 25 to 75 per cent less than the railway charges, depending upon the condition of the river and the character and class of goods shipped.

Merchants are in the habit of purchasing from wholesale dealers in one of the larger seacoast cities and, after the railway freight rates have been added to the large commissions demanded from the wholesale houses, such high prices must be asked for the goods when they reach this market that sales are slow, if not impossible. The almost universal complaint is that "Fine American goods are too expensive," "We can not afford to pay such exorbitant prices," and "German goods are much cheaper than American manufactures," etc. If American exporters will deal directly with the German importer and retail dealer in this jurisdiction, many of the popular

prejudices now existing will be removed; the wares can be purchased at first hand and without the payment of ruinous commissions, so that the retail dealers can dispose of them at prices within the reach of the average purchaser and yet make a handsome profit.

It is for this reason that low transportation charges figure very largely in the estimate of what goods can be sold for, so as to compete favorably with the German producer.

The Rhine and its tributaries penetrate regions quite remote from the sea, while many canals ramify the country and connect with foreign water ways. The following table represents the number and kind of vessels engaged in traffic on the Rhine, their carrying capacity, and the number of men employed during the year 1897:

Nationality.	Vessels of wood.			Vessels of iron.		
	Number of vessels.	Carrying capacity.	Men employed.	Number of vessels.	Carrying capacity.	Men employed.
German:		<i>Centners.*</i>			<i>Centners.*</i>	
Baden.....	253	568,698	520	243	4,198,046	851
Bavaria.....	187	317,206	406	15	166,475	47
Alsace-Lorraine.....	35	71,011	72	5	46,377	16
Hesse.....	149	303,600	311	132	1,697,987	416
Prussia.....	335	1,056,770	815	922	13,604,557	3,026
Wurttemberg.....	7	19,453	16	2	15,642	5
Belgium.....	644	2,802,820	1,479	380	2,158,844	972
British.....	40	109,104	127	2	21,920	7
French.....	12	68,690	36			
Netherlands.....	2,617	6,591,851	6,527	1,413	10,580,410	3,930
Switzerland.....				1	3,522	3
All others.....	10	33,658	27	2	7,542	5

* 1 centner=110.24 pounds.

The steamboats carry both passengers and freight, and some of them are used as towboats to pull the large barges above mentioned. Of these, there are two classes, viz, side-wheel steamers and screw propellers. Their distribution is as follows:

SIDE-WHEEL STEAMERS.

Nationality.	For towing.	Passengers and freight.	Horse-power.	Carrying capacity.	Men employed.
German:				<i>Centners.*</i>	
Baden.....	12	2	2,400	6,079	173
Bavaria.....		2	75	356	6
Alsace-Lorraine.....	1		250		10
Hesse.....	6	4	1,220		96
Prussia.....	48	69	13,984	104,790	1,245
Belgium.....	2		150		14
Netherlands.....	9	2	3,257	82,422	317

* Of 110.24 pounds.

SCREW PROPELLERS.

Nationality.	For tow- ing.	Passengers and freight.	Horse- power.	Carrying capacity.	Men em- ployed.
German:				<i>Centners.</i>	
Baden.....	30	14	1,881	77,988	212
Bavaria.....	1	5	103	.....	21
Alsace-Lorraine.....	2	13	840	128,805	140
Hesse.....	28	24	1,434	3,067	224
Prussia.....	165	106	10,905	384,457	1,460
Wurttemberg.....	7	.....	895	.....	49
Belgium.....	61	17	2,333	49,100	360
France.....	.....	1	.....	.....	5
Netherlands.....	262	67	9,709	259,225	1,417

From the preceding, it will be seen that the total carrying capacity of these vessels exceeds 45,000,000 centners of 110.24 pounds each, giving employment to over 25,000 men. It is estimated that these statistics represent, in round numbers, a value of 100,000,000 marks (\$23,800,000).

One company alone has in service nine passenger steamers of 2,000 to 3,000 tons each, which also carry a greater or less quantity of freight. These maintain a daily service between Rotterdam and Mannheim, consuming, on an average, seventy-three hours upstream and but forty-nine on the return trip.

The following is a table of freight rates between Rotterdam and the chief Rhine ports. Two classes of freight are named, the unit being per 100 kilograms (220.46 pounds). Class A includes all ordinary goods not perishable, and Class B includes perishable articles, such as the various fruits, excluding apples and fresh nuts.

Between Rotterdam and—	Class A.			Class B.		
	Miscel- laneous parcels, etc.	Consig- nments of 5,000 kilo- grams (11,023 pounds).	Consig- nments of 10,000 kilo- grams (22,046 pounds).	Miscel- laneous lots, etc.	Consig- nments of 5,000 kilo- grams (11,023 pounds).	Consig- nments of 10,000 kilo- grams (22,046 pounds).
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Emmerich.....	15.4	14	13	.....	.....	.....
Düsseldorf, Duisburg-Oraoy, Wesel....	16.6	15.9	14.9	28.5	25.7	22.8
Cologne.....	19	18	17.1	28.5	25.7	22.8
Bonn, Neuweid.....	21	20.4	19.2	35.7	32.1	28.5
Coblenz.....	23.8	22.6	21	38	34.2	30.4
Bingen, Rüdesheim.....	23.8	22.6	21	40.4	36.4	32.3
Bieberich, Mainz.....	23.8	22.6	21	42.8	38.5	34.2
Oppenheim.....	26	24.9	23.8	47.6	42.8	38
Worms.....	28.5	27.1	25.7	47.6	42.8	38
Ludwigshafen, Mannheim.....	28.5	27.1	25.7	47.6	42.8	38

A vast quantity of freight is carried by the fleets of barges, especially when the volume of water in the Rhine is normal. A single schlepper, or towboat, of the larger class, brings up four or five

vessels loaded with from 1,000 to 2,000 tons each, a cargo sufficient to make up twenty or twenty-five freight trains. The average freight car is small and light, and during busy seasons so many trains have to be run that serious delays sometimes occur. This is especially true during the period of the annual military maneuvers.

The following table gives the distances between different points on the Rhine and the corresponding elevations above sea level:

Locality.	Distance.	Altitude.	Locality.	Distance.	Altitude.
	<i>Miles.</i>	<i>Feet.</i>		<i>Miles.</i>	<i>Feet.</i>
Rotterdam .....		.75	Mannheim, Ludwigshafen...	351.77	294.6
Emmerich	81.17	40.92	Speier	366.78	306.45
Weasel	112.47	56.94	Sonderheim	379.30	319.53
Düsseldorf	155.72	95.64	Neuburg	395.95	345.15
Cologne	190.14	126.36	Plittersdorf	404.9	
Bonn	210.65	151.2	Wanzanau	427.95	426.88
Linz	225.81	167.81	Strassburg	433.3	446.74
Andernach	233.95	178.62	Gertsheim	447.22	493.14
Coblenz	249.49	198	Schönau	461.14	552.03
Boppard	262.32	210.99	Alt-Breisach	475.53	719.38
Bacharach	279.17	233.79	Basel	512.34	802.86
Bingen	287.95	256.76	Lauterburg	536.41	967.47
Mainz	306.59	269.55	Kaiserstuhl	554.07	1,095.73
Worms	340.46	272.31	Schaffhausen	576.96	1,273.20

The larger tributaries of the Rhine, on which there is considerable shipping, are the Main, the Mosel, and the Neckar. The following table refers to the cities on the Main:

Distance from junction with Rhine to—	Distance.	Altitude.	Distance from junction with Rhine to—	Distance.	Altitude.
	<i>Miles.</i>	<i>Feet.</i>		<i>Miles.</i>	<i>Feet.</i>
Mainz		269.55	Gemünden	129.74	
Frankfort	24.48	300.8	Würzburg	153.17	548.04
Aschaffenburg	52.5	358.16	Schweinfurt	174.79	635.34
Wertheim	95.75	445.68	Bischberg	240.60	763.2

The Main-Danube Canal connects Bischberg with Kehlhofen, 175.8 kilometers distant, where it terminates at an elevation of 330.9 meters (1,082 feet) above sea level, having crossed a divide 418 meters (1,367 feet) above sea level, by means of one hundred locks.

Navigation on the Mosel begins at Coblenz, with the following distances and elevations to La Lobe, a short distance south of Metz:

Locality.	Distance.	Altitude.	Locality.	Distance.	Altitude.
	<i>Miles.</i>	<i>Feet.</i>		<i>Miles.</i>	<i>Feet.</i>
Coblenz		198	Conz	122.78	414.3
Cochem	31.56	258.51	Remich	143.79	455.16
Traben	65.55	416.2	Porl	148.88	459.09
Zeltingen	75	333.84	Diedenhofen	164.98	490.17
Outs	79.91	351.37	Metz	189.71	532.35
Trier	117.56	406.77			

A canal rising 9.1 meters in 20.4 kilometers, through the medium of four locks, connects Metz with La Lobe.

The Necker empties into the Rhine on the north side of Mannheim, and navigation extends to Kannstadt. From the Rhine to Heilbrun a continuous cable chain, lying in the deepest channel, is used to aid the tugs in ascending the rapid current. Frequently as many as twelve to sixteen barges are towed up stream, one attached to the other in single procession.

The following is a scheme of distances and altitudes on the Necker, starting from Mannheim:

Locality.	Distance.	Altitude.	Locality.	Distance.	Altitude.
	<i>Miles.</i>	<i>Feet.</i>		<i>Miles.</i>	<i>Feet.</i>
Mannheim.....		294.6	Kirchheim.....	83.76	549.54
Heidelberg.....	14.96		Kl. Ingersheim.....	92.96	590.94
Diedesheim.....	49.74	425.1	Marbach.....	98.92	617.85
Bottingen.....	55.36	452.88	Neckerems.....	110.48	659.88
Offenau.....	60.94	464.82	Mühlhausen.....		669
Heilbrun.....	71.08	495.87	Kannstadt.....	115.33	694.86
Lauffen.....	78.91	529.98			

The Lippe is navigable from its confluence with the Rhine at Wesel as far as Lippstadt, a distance of 180.3 kilometers (112 miles). The elevation, equal to 75 meters (245.25 feet), is overcome by twelve locks.

The navigation of the Ruhr begins at Ruhrort, on the Rhine, and extends to Witten, a distance of 75.5 kilometers (46.9 miles). The intermediate rise of 81.9 meters (267.6 feet) necessitates the use of eleven locks.

Omitting six or eight short canals, of little importance, there remain two of considerable interest. One, beginning at a point just below Strassburg at an elevation above sea level of 131.159 meters (428.88 feet), is called the Rhine-Rhone Canal. It extends to the borders of France, a distance of 141.3 kilometers (87.8 miles). It crosses an elevated area at a height of more than 350 meters (1,144.5 feet) and terminates at an elevation of 345 meters (1,128 feet). The number of locks employed is eighty-eight. The other canal, designated as the Rhine-Marne Canal, begins at the Rhine nearer Strassburg, extending to the French border, a distance of 110.7 kilometers (68.78 miles), crossing a plateau at an elevation of 267.8 meters (875.7 feet) and terminates at an altitude of considerably less. It has sixty-six locks.

In all of the preceding, the locks have various depths, the shallower ones being 1.2 meters (3.9 feet), while the deeper ones are as much as 2.06 meters (6.72 feet); only the smaller and light-draft vessels navigate these streams.

Previous to the Franco-Prussian war of 1870-71, navigation on the Rhine between Mannheim and Strassburg was carried on only by the lightest draft vessels, 1 meter being probably a fair average depth for the water; whereas, at this time the water is more than double this depth.

The same improvements have been made in other water ways, especially those near the French frontier.

WALTER J. HOFFMAN,

MANNHHEIM, *November 12, 1898.*

Consul.

DEVELOPMENT OF SWEDEN.

In his annual report (to appear in Commercial Relations, 1897-98), Consul-General Winslow, of Stockholm, says, in part:

Sweden has made more progress during the past two years than probably any other country in Europe. That great expanse of timber and iron land in the northern part of Sweden that formerly was the home of the Laplander and his reindeers is just being opened up to civilization. It has in times past been thought to be a worthless stretch of territory, but exploration has brought to light some of the finest mineral land in the world. Immense forests of birch and pine are also to be found awaiting the woodman's ax.

A new railroad is to be constructed from Luleå, over the mountains, into Norway, thus making the territory near to the world's markets and giving it speedy communication with the seaports on the North Sea, which are never closed by ice. Labor is well paid, and it might be said that this land is virgin soil.

Machinery will be needed, iron (manufactured) and steel rails required, immense quantities of canned goods to feed the workers; American pork, fat and heavy, to take the place of butter; tools to put in the mechanics' hands, and tobacco to keep away the mosquitoes in summer and solace the laborer during the long winter nights. Great things are in store for Sweden during the coming years, and her wants are to be many and varied. Our merchants can find an outlet for almost any product that a new country is liable to require. It is a land that is going to be the Klondike of Europe.

A great mistake our exporters make is in not having the goods sent here properly packed and inspected before shipping. Many articles, such as machinery, bicycles, boots and shoes, and provisions, lose their attractiveness and ready sale on account of their poor appearance on arrival. Many orders are placed from samples, and, to the disappointment of the buyer, the merchandise is frequently some grades below the sample which brought the order. A merchant who

has been disappointed in this manner is loath to venture a second time.

Belgium and England have been supplying Sweden with cast-iron pipe, rails, and iron and steel beams, suitable for building purposes. In the city of Stockholm, the old houses are fast disappearing and the modern structures will require a great quantity of these beams.

Sweden has to a great extent been overlooked by our merchants. In a great measure, the American goods come here through German and English houses, thus making the importations more expensive.

COMMERCIAL CONDITIONS IN TURKEY.

In his annual report, which will appear in Commercial Relations, 1897-98, Consul-General Dickinson, of Constantinople, says, in part:

The only reliable or even approximate figures in regard to the trade of this Empire with the other countries of the world are the official returns of the Ottoman Government, and these are fully three years in arrears. The latest return, which was recently issued, is for the fiscal year beginning March 13, 1894, and ending March 12, 1895. According to this return, the imports into and exports from the Ottoman Empire were in value as follows:

To and from—	Exports.	Imports.
America	\$983,531.91	\$320,979.96
Austria.....	5,794,755.91	21,397,054.58
Belgium.....	218,029.68	2,922,259.38
Bulgaria.....	1,675,950.14	4,547,525.22
Denmark.....	68,547.07	10,842.92
Egypt.....		2,374,321.01
England.....	26,197,223.45	40,986,987.58
France.....	16,819,053.68	12,065,724.05
Germany.....	1,221,043.92	1,351,350.57
Greece.....	960,392.88	1,954,702.51
Holland.....	1,455,378.23	742,209.73
Italy.....	2,092,600.81	2,885,925.06
Japan.....	312.89	68,617.38
Montenegro.....	2,473.15	27,302.71
Persia.....	59,136.40	3,096,566.00
Roumania.....	875,971.54	3,314,875.74
Russia.....	1,762,400.42	7,265,891.64
Samos.....	15.88	666.12
Servia.....	323,766.65	257,798.55
Spain.....	5,060.00	9.77
Sweden.....		257,216.65
Tunis.....	1,098.72	83,327.51
Total.....	60,516,743.33	105,932,154.64

While the foregoing figures for the fiscal year ending March 5, 1895, show an increase in both exports and imports over those of 1894, it is not to be presumed that there has been a corresponding increase, or indeed any increase, during the last two years. On the contrary, there are several indications which point to a falling off in trade, especially in imports, during 1897 and 1898; but the opinion of experienced judges is that there has been a gradual improvement and return to former conditions during the latter part of the present year. This opinion, however, is not supported by official invoices of goods shipped from Constantinople to the United States. The value of exports to the United States for the fiscal year ending June 30, 1895, as shown by invoices in this office, was \$2,017,826.17. In 1896, the total of exports was \$2,619,833.12; in 1897, it was \$2,364,240.67; while in 1898, it shrunk to \$1,678,065.71.

While there are no new statistics obtainable, the activity in industries and trade in this consular district, and indeed throughout Turkey, is marked and unmistakable. Germany continues to show energy in every department of business, and is undoubtedly taking each year a part of the business given heretofore to England, Austria, and France. There is a general impression in business circles that the German manufacturers are giving credit upon such long time and to dealers of such doubtful responsibility that they will soon believe that commerce with this country is not desirable.

The English, who have heretofore done the bulk of the importing business in this country, are making no special effort to extend their business—except that a commercial agent for Turkey has recently been appointed—and they seem to be relying upon the reputation they have gained for selling reliable goods. Germany, on the other hand, has already acquired the reputation of manufacturing cheap and comparatively worthless products. The goods of American and English manufacture are the only ones in this market which have an unquestioned reputation for quality. This reputation has led the Germans to manufacture and put upon this market considerable lines of imitations of American and English goods.

But, while American goods have an excellent reputation for quality, so far as they have been introduced, there are some conditions which must be improved before a large increase of American commerce with this country can be expected. The heavy freight charges, amounting to nearly \$10 per ton, which American manufacturers are now compelled to bear are practically prohibitory, except as to novelties and classes of goods and products in which American manufacturers and dealers start with a decided advantage over those of other countries. As these freight charges and the cost of transshipment at Liverpool and other ports prevent the products of the

United States from competing with Great Britain and other countries on equal terms, it may be assumed that American products which find their way into this market are either better in quality or are manufactured under more favorable conditions than the foreign articles with which they compete.

The principal products of the United States now sold in considerable quantities in this market are tools (such as chisels, saws, and planes), locks and other house hardware, clocks and watches, cotton twills (unbleached) and "canot" (the latter being a blue twill much used in Asia Minor), rubber shoes, lamps, pumps, stoves, perfumery and patent medicines, lubricating and kerosene oils, typewriters, pianos, desks and chairs, machinery for flour mills, agricultural implements, iron water pipes and other products of iron and steel, sewing machines, and flour.

This last-named article was but recently introduced, but its superior quality has attracted wide attention; and at present prices, it seems able to drive the Turkish, Russian, and Roumanian product from the market. A few months ago, a firm in this city ordered from Duluth 200 bags of flour, weighing about 16 tons, as an experiment. In spite of the fact that the freight was about 40 English shillings per ton, there was a substantial profit on the transaction; and, as a result, this firm has telegraphed further orders, amounting to 28,000 bags (over 2,300 tons), and a part of this flour is now on its way to this city. Several cargoes of manganese and chrome ores have been carried this season from Black Sea and Mediterranean ports to the United States for less than 12s. (\$2.91) per ton, and the flour dealers here best capable of judging believe that if such reasonable freight rates as would naturally result from a direct line of steamships could be obtained, the principal markets of Turkey and Greece would be supplied with American flour.

The articles mentioned are only a few of the American products which would find a ready market here, if the shipping and freight conditions were only moderately improved. The marked difference of cost in this market and in the American market of many articles and products which are rarely seen here, except of foreign manufacture, compels the inference that they might be profitably introduced under present conditions of transport. Some of these are furniture of all kinds, leather, boots and shoes; sash, doors, blinds, and other finished building material; wagons, iron goods, and general hardware; and cotton goods of every description. These last are considerably higher in this market than in the United States. There is already a firm demand here for unbleached American cotton goods.

Much has been written and said of the long terms of credit given by German and Austrian manufacturers to the retail dealers of this

country, and it has been contended that the conservative ideas of American manufacturers, the large percentage of irresponsible dealers in Turkey, and the difficulty in enforcing collections render the markets here uninviting to American trade.

The conditions complained of are partly real and partly fictitious. They are not unlike conditions in the various States of the American Union, except that a somewhat longer credit is given here; but the tendency is decidedly toward cash or shorter credits. Nearly all the American goods entering the Turkish market are sold for cash or upon very short time. In many cases, a remittance or deposit is required at the time the order is given. Long credit is not given by any manufacturers to dealers here, unless their responsibility is unquestioned.

The bulk of the business in Turkey has long been held by British manufacturers. They have established relations with the most reliable and responsible merchants in every town; and it follows that if American manufacturers would take a part of the most desirable business from those who hold it now, they must meet the English manufacturers on nearly equal terms, or they must offer the purchaser a better or handsomer article or one better adapted to his taste or use. The fact that most of the American goods already sold here are sold substantially for cash, and at prices higher than similar goods of foreign make can command, is an indication of what might be done under more favorable conditions.

As to the difficulty of collecting debts, there is no more trouble or delay in collecting debts in Turkey than there is in many of the United States. As nearly all the merchants in Turkey are Greeks, Italians, English, Germans, Austrians, and French, a resort to the Turkish courts is scarcely ever necessary. The creditor must sue the debtor before the latter's consul, and he is usually a man of such high sense of integrity that he will not shield a debtor, unless he is able to make a substantial defense upon the merits of the case. Moreover, the consular courts are always open, the proceedings are summary, and there is less delay than in any courts of the United States, except the courts of inferior and limited jurisdiction, like the justices' courts of the State of New York.

It being, then, reasonably apparent that there is a large market in Turkey, Greece, and southern Russia for American goods and products, it remains to be considered whether the American manufacturer and producer can enter these markets on equal or nearly equal terms with their European rivals. In order to do this, the expense and delay of the long haul from our Atlantic seaboard to these markets must be reduced to a minimum. A direct freight service, therefore, becomes important, if not absolutely necessary;

and to this end I have obtained facts and figures to submit to the merchants and manufacturers of the United States and to our organized commercial bodies, as to the actual business in sight which might justify, or at least influence, the establishment of a direct steamship line or the extension into these waters of a line already running between New York and European ports.

Through the kindness of Minister Rockhill, of Greece, and our consuls at Athens and Patras and in Turkey and southern Russia, I have been furnished with reports of the tonnage of goods and products shipped from these ports to the United States during the year ending December 31, 1897, and June 30, 1898, as shown by our consular invoices, which reports I have tabulated as follows:

Weight of exports to the United States.

TURKISH PORTS.		Tons.
From Beirut, during year ending June 30, 1898, consisting of bitumen, licorice root, wool, etc.....		1, 869
From Damascus, during year ending June 30, 1898, consisting of wool, carpets, and oriental goods.....		196
From Haifa, during year ending June 30, 1898, consisting of soap and olive oil.....		20
From Alexandretta, during year ending June 30, 1898, consisting of licorice root, goatskins, etc.....		6, 558
From Aleppo, during year ending June 30, 1898, consisting of wool.....		432
From Mersine, during year ending June 30, 1898, consisting of wool.....		12
From Smyrna, during year ending December 31, 1897, consisting of licorice root, figs, raisins, wool, etc.....		25, 680
From Constantinople, during year ending December 31, 1897, consisting of chrome, berries, canary and millet seed, opium, wool, waste rubber, rugs, etc.....		8, 002
From Salonica, during year ending December 31, 1897, consisting of skins, tobacco, wool, manganese, opium, etc.....		11, 988
		54, 757
GRECIAN PORTS.		
From Piræus, during year ending June 30, 1898, consisting of manganese, magnesite, sponges, etc.....		4, 487
From Patras, during year ending June 30, 1898, consisting of currants, etc..		11, 747
From Zante, during year ending June 30, 1898, consisting of fruits, etc...		66
		71, 057
BLACK SEA PORTS.		
From Odessa, during year ending December 31, 1897, consisting of manganese, wool, goatskins, etc.....		5, 065
From Rostoff, during year ending December 31, 1897, consisting of wool, etc..		4, 353
From Batum, during year ending December 31, 1897, consisting of manganese, wool, licorice root, rugs, etc.....		52, 945
From Trebizond, during year ending December 31, 1897, consisting of hazelnuts, etc.....		45
From Samsoun, during year ending December 31, 1897, consisting of wool, goatskins, tobacco, etc.....		70
Total.....		133, 535

The foregoing statement shows that the total tonnage of goods and products invoiced through the principal consular offices in Turkey, Greece, and southern Russia during the past year was more than sufficient to supply all the freight a semimonthly line could carry to the United States. Of course, it is not to be assumed that all of this tonnage could be controlled at once by any particular line, but it may be believed that a direct line would be able to offer a freight rate with which indirect lines could not compete. Moreover, the shipments shown by this statement are only of goods and products which appear from our consular invoices, and do not include large shipments sent to London, Marseilles, and other European ports and there resold and transshipped to the United States, a large part of which would find a direct market to the United States under favorable freight conditions. For example, Beirut sends annually about 900,000 pounds of raw silk to France, where the most of it is prepared for and transported to the American market. There seems to be no good reason why the bulk of this product should not be shipped directly to the United States, the reeled silk prepared for the American mills by American labor, and the profit of the French middleman, amounting to many thousands of dollars, saved to American capitalists and consumers.

These figures of west-bound tonnage should also be increased by several full cargoes of ores and other products admitted free of duty, which were shipped directly to the United States from Mediterranean and Black Sea ports during the past year, and were not included in our consular invoices. It may also be fairly inferred that if direct communication were opened and the time of transit and freight rates thus reduced, it would greatly stimulate the present movement of products to the United States. I understand from our consuls in Greece that fully 150,000 tons of currants are exported annually from that country, of which less than 12,000 tons appear in our consular invoices; and that if a direct line were running, a very much larger tonnage of this product would be sent directly to the United States, instead of being sold and shipped to London and other ports, from which a large percentage of the product finds its way to the American market. The consuls further inform me that all of these 150,000 tons of currants are carried from Greece in barrels and boxes, the lumber for which is wholly imported and dressed by hand at great expense; and there is no reason why this lumber should not be dressed by machinery and brought from the United States to Greece, and thus form an important item of freight.

My information as to the tonnage of imports from the United States into this country is more indefinite. Definite figures are not obtainable; but the value of goods invoiced directly to these ports during the last year was \$1,878,600. These figures represent only a part of the

American goods brought into this country, for a large number of merchants purchase all their American goods from wholesale houses in London. I hear from many sources in Constantinople, Beirut, Smyrna, and in the United States of several lines of goods which would seek a market in Turkey, Greece, and southern Russia, if it were not for the sixty or more days consumed in transit, and especially the high rates of freight, cost of transshipment, wharfage, breakage, etc., incident to the long route by way of Liverpool or some other European port.

The amount of business that would naturally come from America would of course depend on the freight rates which a direct line might be able to offer. Goods are sold on narrow margins of profit. The competition in every department of business is so keen that the whole question as to whether products can enter a market may often turn upon a slight variation in the rates of freight. The direct business from the United States might not be sufficient to support a line at the outset, and, if necessary, steamers could take east-bound freight to the other European ports. There is, I am informed, a large and growing business from the United States to ports in the Adriatic Sea. Fiume is mentioned especially as a distributing point for a large region of country which has considerable commerce with the United States and is not well supplied with steamship facilities. The business of a direct line would also profit at times from favorable conditions in the American and Turkish markets. Two or three cargoes of American kerosene in cans are now brought each year to Greece and Turkey; there have been several months within the last two years when American coal, potatoes, butter, and other produce could have been imported into Turkey at a handsome profit. Butter is now imported here from Australia and competes with the Russian product, which is poor in quality and high in price.

The opinion of our consular officers in Greece and Asia Minor is unanimous that an improvement of our freight service lies at the threshold of any attempt to increase the sale of American goods in these markets.

COMPETITION OF THE UNITED STATES WITH ENGLAND.

The following paragraphs are from the annual report of Consul Halstead, of Birmingham, which will appear in Commercial Relations, 1897-98:

The commercial relations of the United States with Great Britain and other great trading nations are changing so rapidly, and the changes are so much in favor of every home interest, that one

hesitates when giving even the simple facts for fear of seeming to indulge in exaggeration. I shall therefore limit myself to the statements, first, that in my opinion there is hardly a single line of American manufacture of articles used also in other countries, as well as many novel things not known elsewhere, but could be profitably exported if proper steps for its introduction were taken, and if careful, slow, reasonable, and common-sense methods of sale were adopted; second, I must add that, while I believe we are the best manufacturers in the world, I am also convinced that we are the poorest traders, and this is impressed upon me over and over again every day in my correspondence with American merchants and manufacturers and in my observations of the way they are handling the new export trade and of their endeavors to get into it; third, it is my idea that American export trade is rolling up like a snowball because of a 50 per cent superiority in manufacturing knowledge and natural resources, and despite a 15 to 30 per cent inferiority in trading knowledge, a heavy percentage of unwillingness to learn foreign trading customs, and a still greater percentage of lack of foreign merchant facilities and organization. If a small portion of the vast sum of money in the United States now seeking investment could be employed in some form of export scheme to handle American goods, we would soon be able to record a greater export of American goods than of the raw products of the soil, though to-day we are boasting of an excess of manufactured exports over the manufactured imports. Instead of summarizing the conditions I see here, I offer the following clippings from British publications, selected somewhat at random from many in my possession and illustrating the keen appreciation here of what our competition means and may mean:

[From the Birmingham Daily Mail.]

By cheaper methods of production, America is overtaking us in more than one department of manufacture. Startling to the Midlands are the figures published to-day concerning nails. Statistics show that the exportation of wire nails from the United States has grown from 1,547,078 pounds in the fiscal year 1888 to 22,894,099 pounds in the fiscal year 1898. The growth, which has been phenomenal ever since the beginning, has been especially so in the last two or three years. In 1895, the exportations were 4,367,267 pounds; in 1896, 8,031,927 pounds, thus practically doubling in one year; and in 1898, 22,894,099 pounds, showing a similar gain in the last two years, the exports of 1898 being five times more than in 1895. This is not very pleasant when one puts this side by side with the fate of the nail trade in the Midlands. Moreover, Chicago has become the seat of an iron-bedstead industry that threatens to defy competition, the United States generally is knocking even Germany out in the manufacture of cheap boots, and, besides this, American steel rails are being sent to Ireland and Bombay, while the estimates sent in for the supply of plates for the construction of a 6,000-ton ship show that in accepting an American contract there will be an economy of \$10,000, as compared with the lowest English tender.

[From the British Iron and Coal Trades Review.]

The wonderful achievements of the United States in the way of reducing the costs of the production of iron and steel form the subject of one of several articles that have been written for the Review by a high authority. These figures supply the most obvious answer to the now almost daily question as to how the United States have succeeded in bringing their costs of production down to such a low level with nominally high labor costs and long transportation still a part of their daily lot. It appears that the labor cost of producing the crucible steel that was manufactured in the United States between 1860 and 1865 was about £15 (\$72.99) per ton, against probably not more than 10s. (\$2.43) per ton at the present time; and that between 1880 and 1890 the labor cost of producing a ton of pig iron, speaking generally, had been reduced more than one-half, while in some States the average annual output of pig iron per employee at the furnaces had more than trebled. All this, however, is not any more wonderful than the revolution that has been brought about in the cost of raw materials. It seems but yesterday when Lake Superior ores, delivered at works in Pennsylvania, cost 30s. to 35s. (\$7.29 to \$8.51) per ton, whereas the same ores cost to-day about 15s. (\$3.65), more or less. Most of us can remember when coke cost 30s. (\$7.29) per ton delivered at Chicago, while the same fuel at present costs 12s. to 15s. (\$2.92 to \$3.65) similarly delivered. The wage cost of producing a ton of pig iron at the furnaces at Pittsburg or Chicago was equal to 20s. (\$4.86) less than a quarter of a century ago, whereas to-day in the best regulated works it costs 2s. to 3s. (49 to 73 cents). In most other items of cost, similar economies and reductions have been effected. It has been the union of more efficient labor, more economical transport, and increased competition among mine owners that has enabled this remarkable change to be effected. Twenty years ago, mine owners were hardly satisfied with less than 10s. (\$2.43) per ton profit on the highest grades of ore. To-day they will gratefully accept less than a shilling (24 cents). The business is nevertheless a prosperous one, because the mine owner has substituted small profits on a large output for large profits on a small output, and is doing a more sound and healthy business. The same remarks apply to the pig-iron maker, the coke manufacturer, and the producer of finished descriptions of iron and steel. This tendency to look to larger yields and smaller profit has not reached finality. It has been manifested in a marked manner in the recent combinations of works and mines and in the growing disposition to get rid of all extraneous sources of expenditure. In all branches of business alike, it is a fundamental axiom that the larger the scale of operations the cheaper the possible costs of production. The United States have given practical expression to this principle on the largest possible scale, and thus, and thus only, have they been able to place themselves in the front rank of iron-producing nations.

The success of our American friends has been due to their vigorous and persistent attention to elements of business administration which have been less effectively developed at home. The first of these has been a more complete control of the conditions of labor, based upon a generous recognition of the principle that nominally high-priced labor is not necessarily the most expensive. The second has been the command of extensive economical and competitive means of transportation. The third has been the substitution of combination for competition wherever possible. The fourth has been the practical application of the old rule that if you want to produce cheaply you must produce on a large scale. There are other lessons inculcated by American experience for those who are capable of reading between the lines. Unfortunately, British manufacturers are often so situated that they can not effectively apply all these lessons, but we can not help thinking that they might do so to a larger extent than they have hitherto done.

[From the Birmingham Daily Post.]

How rapidly the trade [of the United States] is developing, and how formidable it is becoming for other mercantile nations, has been pointed out in these columns lately on more than one occasion, and additional light is shed upon the subject by some information which will be found in our commercial pages to-day. Up to a comparatively recent period the manufacturers of the United States, however enterprising and well equipped, were formidable only in their own country. In neutral markets, the only American products that met us were, with few exceptions, of the agricultural class. Within the last few years, however, the trade relations of the two countries have undergone an enormous change, which is not at all to our advantage, and both in textile and metallurgical products the Americans are now doing a great and rapidly growing export trade, which has already invaded to some extent our home markets. According to the annual report of the American Bureau of Foreign Commerce for the year 1896-97,* we find that whereas in 1892 the agricultural exports of the United States, out of a total of over \$800,000,000, constituted 79 per cent of the whole, against 16 per cent of manufactured goods, in 1897 the exports increased to over \$1,000,000,000, of which agricultural products constituted only 66 per cent to 27 per cent of manufactured goods. Among the latter may be mentioned more particularly manufactures of iron and steel, wood, copper, cotton and leather, scientific instruments, agricultural implements, clocks and watches, carriages, and railway cars. We know from our own experience in the Midlands how greatly the imports of American iron and steel into this country have increased in the last few years, and we can quite believe the statistics in another column as to the growth of American manufacturing industry in the cut and wire nail, metallic bedstead, and leather-working trades. According to the figures relating to the nail industry, it would seem that the price of wire nails in the United States has lately fallen to 2 cents a pound, as compared to 10 cents a few years ago; and cut nails are offered at about £14 14s. (\$71.54) per ton. These are certainly facts which give pause to our manufacturers and their work people, and impress upon the former the need of more economical methods of production, better organization, and a closer subdivision of labor, and upon the latter a more liberal and more elastic code of trade-union rules, if we are to hold our own against the invasion of American industry and obtain the full benefit of the "open-door" policy which is now extending in so many parts of the world.

BOLTS AND NUTS IN ENGLAND: MISTAKES OF UNITED STATES EXPORTERS.

In his annual report (to appear in *Commercial Relations*, 1897-98), Consul Halstead, of Birmingham, says:

The following important circular has been issued to the principal nut and bolt manufacturers in my consular district (which covers nearly all that part of England known as the Midlands) by T. W. & J. Walker, well-known merchants of Wolverhampton:

WOLVERHAMPTON, *November 22, 1898.*

DEAR SIR: We beg to call your attention to the subjoined prices of bolts and nuts, which are those we are at present paying to American manufacturers. You will notice that the prices are from £2 to £4 per ton less than the prices at present

* See *Review of the World's Commerce*, 1896-97, p. 20.

ruling in this country. The quality of the bolts and nuts is fully equal to the very best quality made in this country. Most of our largest customers for bolts and nuts in Australia and South Africa have ceased ordering from us, informing us that they are purchasing from the United States; and others, whilst sending us their orders, instruct us to purchase from America as long as prices are so much lower than in England.

We think the matter is of so much importance to the manufacturers of this country that we venture to bring the subject before you.

We are yours, faithfully,

T. W. & J. WALKER.

Best carriage bolts and nuts, Whitworth thread.

	s.	d.
1½ by ½ and ¾.....per gross...	1	1½ = *\$0.27
2½ by ¾ and 1.....do.....	1	4 = .32
3 by ¾.....do.....	1	9 = .42
3 by 1.....do.....	2	0½ = .49
3½ by 1.....per cwt...	11	4½ = 2.73
4 by 1.....do.....	11	1½ = 2.67
6 by 1.....do.....	9	3 = 2.22
8 by 1.....do.....	8	9 = 2.10
10 by 1.....do.....	8	0½ = 1.93

Longer lengths are lower in proportion. F. o. b. New York. Less 2 per cent cash. Casing free.

In printing this circular, the Birmingham Post comments as follows:

The recent remarkable development of American manufacturing competition, to which we took occasion to refer a few days ago, is being brought home to some of our Midland producers and their work people just now in a very practical and disturbing manner. Our recent remarks had reference more particularly to the increasing imports of American iron and steel, not only into neutral markets, but into this country; but it will be seen from the circular letter reproduced in another column, which has been addressed by a Wolverhampton merchant firm to our leading local makers of nuts and bolts, that the competition is not confined to crude products. Messrs. Walker state that their once valuable trade in English nuts and bolts is practically killed, owing partly to the much lower prices quoted for those goods by American manufacturers, and partly to the much lower freights charged for their transport from the United States to foreign and colonial markets than those demanded by the same shippers for the conveyance of similar goods from this country. This latter evil is possibly only temporary, for it is almost incredible that shippers will continue indefinitely to lose money on the transport of goods, as they must now be doing, at the rates quoted on more than one line from New York, for the purpose of crushing or tiring out some rival shipping house; but the underselling of United States manufacturers is a more formidable and, we fear, more durable danger to our trade. According to the price list cited by Messrs. Walker, it would seem that American nut and bolt manufacturers are now underselling those of this district by from £2 to £4 per ton, and there is no reason to suppose that the goods are in any way inferior to those of English makers or that the prices do not yield the makers a good profit. The simple explanation of the underselling is that the American manufacturers are able to obtain their iron and

* The column of figures giving the American equivalents is the consul's, and was not in the Walker circular.

steel at prices that would be impossible in this country, owing partly to the cheapness and abundance of their ore and fuel, and partly to the large scale and advanced character of their mechanical appliances. We have it on Mr. Andrew Carnegie's authority that steel can be bought in the United States for less than £3 (\$14.58) per ton, and we know from the testimony of the import tables in our Board of Trade returns, which show an import of 25,000 tons this year, that it is being put down, carriage paid, in this country at considerably under the English market price. Under these circumstances, it is not surprising to learn that the American nut and bolt makers are underselling us in Australia and South Africa, to both of which places just now they enjoy preferential freights. The question is a vital one for our manufacturers and their work people; for, though the nut and bolt trade, we believe, is momentarily active and prosperous, owing to the recent special activity of railway enterprise, it can not long afford to dispense with the support of those colonial and foreign markets of which American makers are now obtaining a virtual monopoly. Merchants like Messrs. Walker can doubtless to some extent protect themselves by transferring their orders to the United States; but the outlook for our nut and bolt makers is unquestionably a very serious one, and we trust they will lose no time in going into conference on the subject, with a view, if possible, to some reduction of the present great disparity between English and American prices.

There are 20 shillings with a 24-cent value each in a pound sterling, and my comment on the Walker circular is that every time an American concern sells nuts and bolts abroad at £2 less than the British price, there is a loss to the American seller of about 38s., or \$9.24, a ton of possible profit, and that every time the British price is broken £4 a ton, there is a loss of possible and reasonable profit of 70s., or \$17.03, a ton. It might be reasonable to underbid 5s. or 10s. or even 15s. a ton, but why beggar the markets of the world by slashing prices in this way?

When the English were the cheapest and greatest manufacturers in the world, they filled their country with untold wealth, because they were also the best traders; and their prices abroad were based on what they could get, and not on the cost of manufacture plus some significant profit.

Now that we can manufacture some things (we manufacture nearly everything as cheaply as any people) at tremendously reduced costs, why should we give away more of our advantages to the world at large than is necessary to get the business? No one can say that it is necessary to underbid £2 or £4 a ton in order to capture the nut and bolt business, and, if a trade trust ever was right, it would seem to be legitimate to form one now in the bolt and nut business of the United States, in order to handle and protect the export trade. This beggaring of business, these unnecessarily low prices, this absurd underbidding on the part of Americans, is constantly brought to my attention here, and it is so foolish that sometimes it is fairly heart-breaking. I am having some facts and figures prepared, and hope to make a showing of how general it is.

A few weeks ago, I sent a consular report stating that a certain

article of manufacture [stamped ceilings]* was unknown here, and I knew there would be a sale if prudent, persistent, and careful methods were taken for its introduction. As a result, I am overwhelmed with catalogues and letters from manufacturers of this article from their Western and Central and Eastern agents in the United States, from their "sole" export agents in several Atlantic seaport cities, and even from their friends. In one case a lawyer writes hoping I will be partial to his client, and all of them are in a scramble to get at once what I said might be a good business in the near future if the article were slowly introduced and a beginning made.

The American bicycle business here is still suffering from a similar scramble of our manufacturers several years ago, and I hope someone will tell me how I am to restrain, in their own interests, those people whom I have stirred up because of the facility of publicity and dissemination of information by means of the daily CONSULAR REPORTS.

A concern which wrote the most sensible and complete and best business letter I have ever seen has already had my assistance. The cost of freight, the weight per square foot crated and uncrated, the thickness of the article, size of crates, the protection against weather damage, the length of time required to fill an order, the lines of ships which probably would carry it, the proper form for specification of orders—were all given, and I have not discovered in this letter a point uncovered. In addition, the concern even seemed aware that a sort of educational campaign would be necessary.

Since my report referred to, a manufacturer of the goods has opened a London agency and has samples on hand. A London builder told me he would like to see someone who handled the goods. Did I do right to refer the London agent of the manufacturer of stamped-steel ceilings to the London builder? I think so, and believe I did right also in giving the first catalogue I received to the architect I thought I had interested in steel ceilings. But I have not given all the catalogues to the same people, and am doubtful as to the advisability of helping to build up one of those open competitions where cost and profit of manufacture is forgotten in a fight to be the "successful" seller.

How disastrous this sort of thing may be, can be seen from the story of the wood-working machinery trade in the United States, where, to obtain a \$4,800 order of machinery in a little Pennsylvania town, the total expense to the trade was \$1,600 and the competition so hot that the "fortunate" manufacturer who got the order made nothing.

An amusing thing in this steel-ceiling experience (at the same time

* See CONSULAR REPORTS No. 219 (December, 1898), p. 621.

there is a serious business point to it, for Canada as a colony has no consular service in England, and I am often able and always glad to be of assistance to those interested in Canadian matters) is the following letter from a Canadian manufacturer addressed to Consul Halstead, Birmingham, England:

DEAR SIR: We note that you are quoted in Canadian trade papers as saying that you would be good enough to hand any catalogues that you might receive from American makers of metal ceilings to architects likely to specify same. We have therefore taken much pleasure in mailing you under separate cover our catalogues which illustrate and describe the variety of goods we manufacture. We might add that we employ nothing but the very best of labor. Our tools are all modern, and materials of the best quality; and as our Mr. ———, sr., has had the experience of a great number of years in this line of business, we are prepared to guarantee our goods equal to any manufactured, bar none.

You will confer a great favor, therefore, by handing our catalogues to some prominent architect, and we will be only too pleased to furnish you with further copies on request.

Thanking you in advance, we are, yours truly,

— — —

I am almost ready to yield to the temptation to help this Canadian manufacturer along as a promotion of Anglo-American friendly relations, for I did say I would take care of catalogues of "American" makers of steel ceilings.

Returning to the question of unnecessary slashing of prices, an English manufacturer said to me the other evening:

Business is business, and when your people can sell cheaper they certainly should and will make the sales; but I very much fear that, owing to their inexperience in foreign trade, they are going to demoralize prices the world over. When big profits are in sight and possible, they seem ready to give away the benefits of your grand natural resources, of your manufacturing brains and tremendous energy to Kaffirs, Cape Colonists, and other Africans; to Australians, West Indians, South Americans, Japanese, and even to the "heathen Chinese," for a petty profit, simply because they have no knowledge of foreign trade and certainly no trade patience. They will lower all market values. Even in this country, Americans are selling nearly everything for lower prices than are necessary. Tremendous quantities of your electrical goods are coming into this country now, and all at too low values. The fancy ornamental poles demanded here for carrying overhead-trolley wires cost so much to manufacture that a Britisher will not bother with them for less than £14 (\$68), but your people are bidding £10 (\$48); why not ask £13, or, if you must sell low because you are nervously impatient, why not ask £12? Where municipalities demand that the poles be of British manufacture, it might be keen sport for the Americans to bid so low, knowing they can not get the order. But when there is no such restriction and the order is yours, why take £10 when you can get more? If the same thing is going on all over the world, it is a warfare against reasonable trade and will react.

A Birmingham business man called on me to-day, asking to be put in communication with some American manufacturer of carriage nuts and bolts. He has a trade of about 100 tons a month,

will pay cash in New York or any other good Atlantic seaboard city, and intends to keep in stock from 100 to 200 tons; and, of course, he wants low prices. He gives the Birmingham branch of the Bank of England as financial reference. I shall not trouble the manager of that bank until I hear from some American nut and bolt manufacturer. Just as I am finishing this report, I receive a letter from another merchant, asking for the names of nut and bolt manufacturers.

TRADE OF LIVERPOOL WITH THE UNITED STATES.

The following is from the annual report of Consul Boyle, of Liverpool, which will appear in full in *Commercial Relations*, 1897-98:

The past year has been the best one in history for trade in American products in this district, and there is every reason to believe that it will continue to grow. There has been a very material decline, however, in trade generally at this port during recent years. The value of the total imports into Liverpool from all countries in 1891 was \$560,344,600; in 1897, \$495,248,234—a decrease of \$65,096,366. The value of the total importations in 1897 was \$7,821,325 less than in 1896. There has also been a very material falling off in the total exports to all countries from this port. In 1891, the value of the total exports to all countries from Liverpool was \$526,080,582; in 1897, \$439,673,765—a decrease of \$86,406,817. In 1897, the value of the total exports from Liverpool was \$13,759,150 less than in 1896. There are two very remarkable facts in connection with this great falling off in the trade of Liverpool. First, that, contrary to general belief, the falling off in exportations has been not only with the United States, but with the world at large, and, so far as importations are concerned, those from the United States have been continually increasing; second, this decrease of trade is in spite of the fact of a substantial increase in the tonnage of vessels entering and clearing at this port. Notwithstanding the decline in importations, the gross amount of customs revenue collected is continually increasing. The customs revenue collected at Liverpool in 1897 was nearly \$1,000,000 in excess of that collected in 1896, and about \$2,500,000 more than in 1891.

While the figures covering the importations at Liverpool from the United States are not available, there is not the slightest doubt that more American goods, both agricultural and manufactured, came into Liverpool during 1897 than in any other year; and even the exports to the United States in 1897 show a substantial increase

over 1896. In the calendar year of 1891, the value of the exports from the Liverpool consular district to the United States was \$36,-362,254, and in 1897, \$22,871,036—a falling off of \$13,491,298; but the exportations in 1897 show a gain of \$2,122,745 over 1896. The exports again materially declined in the first six months of 1898, their value being \$9,649,338, as against \$14,621,821 in the same period of 1897—a falling off in the six months of \$4,972,483. The declared exports from this port to the United States for the nine months ending September 30, 1898, were valued at \$13,910,563, being a decrease of \$4,320,540 as compared with the same period of 1897. The figures for the quarter ended September 30, 1898, were \$4,261,224, being an increase of \$661,944 over the corresponding quarter of 1897.

It is to be doubted whether the British public generally realize the extent to which their trade has fallen off. The explanation generally given for the decrease during the past year is that it has been caused by the great strike of the engineers, which ran through the latter half of 1897 and well into this year. Labor has during the past year been employed at increased wages over those paid previously, as a rule. But the productive capacity of the British mechanic no longer takes the lead. It is exceeded by that of the mechanic of the United States and of Germany. This is owing to three reasons: First, the British manufacturer does not avail himself of the latest improvements in machinery; second, the British mechanic is not now as technical as the American and the German mechanic; third, the labor market is continually being disturbed by strikes and lockouts. In spite of the above facts, there is a general confidence that the British foreign trade will revive. Manufacturers are becoming more enterprising in using up-to-date plants (the machinery largely coming from the United States). The engineers and coal miners and their employers will probably not have another dispute for some time; the labor outlook, generally, is more pacific than for some time past; technical schools are being opened in most of the manufacturing towns; and in Liverpool and other commercial centers commercial schools have been opened to more especially meet German competition in foreign markets.

Canadian competition with the United States in this market in meat, corn, provisions, and fruit has developed greatly during the past year, and threatens to be keener in the future.

MEAT AND CATTLE.

The most noteworthy phase of the trade in American beef is the great increase in the importation of chilled meat. Until quite recently, it has been considered that the meat of American cattle slaughtered here was far superior to chilled meat, but there is

undoubtedly a great change in this regard, and many buyers and sellers claim that the American chilled beef is equal, if not superior, to the meat of American cattle slaughtered here. The chilled-meat trade is increasing enormously, and there is a growing conviction that in the course of a few years it will almost entirely take the place of American meat brought on the hoof. The meat of American cattle slaughtered here is put through a process of chilling, but, owing to the inexperience of the English people and their lack of facilities, the process is not as satisfactory as in the United States.

American meat is often sold as English; indeed, the choice cuts of American beef are preferred by many of the large butchers to the best English cuts. Experts say that English cattle are depreciating in value and quality, one reason being that animals are now being slaughtered at two years old, instead of four years as formerly. Not only is the trade in chilled beef increasing to vast dimensions, but there is a large and increasing trade in fresh chilled pork. It is a fact not generally known here to those outside the trade that most of the pork pies which are a staple article of food among the English working classes are made from fresh chilled American pork.

Within the last few months, there have been several experiments in shipments of chilled poultry from the United States. Poultry is very dear in England, and is of an inferior quality to American poultry. There is hardly any limit to the possibilities of the trade in American poultry, if it can be brought over here in good condition.

American mutton is not making headway, largely because it is fattened too quickly. There is a large and increasing quantity of frozen beef and mutton being brought from Australia and New Zealand. While the quality of antipodean beef is not comparable to the American meat, these importations greatly affect the sale and price of the latter. The Canadians are also seeking a share in the chilled-meat trade, and active competition is probable in the near future.

During the year ended December 31, 1897, there were imported into Liverpool from foreign countries 94,671 tons of beef, 36,259 tons of mutton, 279,390 head of cattle, and 229,125 head of sheep. No record is kept by the local authorities as to the ports from which the supplies are received, but it may be safely assumed that nearly all of the fresh meat and the cattle and a large proportion of the sheep were imported from the United States.

BACON AND HAMS.

There is a good demand for American bacon and hams, and, provided they come mild and not too fat, there is every prospect of increasing sales; they should not be smoked. So long as the hogs are

fed on indian corn, the bacon and hams will not give the same satisfaction as the bacon from Canada, where, I understand, pease and oats are used for food. Bacon that is the least salty will not suit the taste of the British public; therefore, care has to be exercised in shipping mild hams and bacon so that the supply is not in excess of the demand, as they will not keep for any length of time. Up to the present, there is not sufficient cold-storage accommodation in Liverpool; but this want is being provided for by a public company, and one of the large bacon importers is having such accommodation fitted up in his own warehouse.

CHEESE.

The fact that American cheese on this market is being displaced by Canadian, is becoming more and more apparent. On inquiry from reliable sources, I am told that this is principally owing to the method of manufacture, which is spoken of here as being radically wrong; and, assuming that the American factory men generally wish to compete for the English trade, the sooner they set about altering the style of manufacture the better. It is stated by the trade that the manufacturers in the United States of what is known as the "quick-ripening" process cheese have in a great measure ruined the trade for American cheese. One of the reasons of the present deadlock here has been the fact that the summer make of these "quick-ripening" cheeses were sold at too high prices and went into the hands of the retailers, who have been unable to clear them promptly, and, consequently, they have "gone bad" on their hands, the result being that the dealers, or retailers, can not now push the trade for mild late-made cheese. The consensus of opinion is that it is a suicidal policy on the part of the factory men to allow cheese to be manufactured that will keep only for a short time. Cheeses so made, on arrival in England, are so ripe as to necessitate immediate disposal; otherwise they are liable to get, if kept, first strong in flavor and afterwards almost putrid.

In an interview with one of the leading firms of cheese importers in Liverpool, I learned that years ago he took the cheese of certain special factories in the United States for years, week after week, with the knowledge that when the cheese arrived in England it would be as good as when shipped, and would keep a reasonable length of time in the hands of the retailers; but now, he says, this is all changed. I was shown some of these "quick-ripening" cheeses, and they were so soft that the least pressure of the finger made a mark, whereas the Canadian cheeses were firm and solid. The firm mentioned above, which has a house in New York, did not, until a few years ago, deal in Canadian cheese, preferring the American,

which was of better quality and better made; but now it handles far more Canadian than American.

This "quick-ripening" process further entails serious loss in weight to the importer from shrinkage in transit, even when promptly sold. From the same cause, cheese becomes "discolored and mottled," and "porous open made," and is difficult to sell.

Lately, the price of American cheese has still further declined, not so much because of the market as that in most cases importers and dealers alike have lost confidence in the article. In Canada, the makers are educated and trained to manufacture a reliable article, and for years past the make could be depended upon to keep for any reasonable length of time. The Canadian Government, so the importers here state, recognizes the value of the product and affords every facility for the education and training of young men for the manufacture of high-class cheese. Such cheese is bought on this market "unseen."

FRUIT.

The outlook for the apple trade here is good, as the crop is short, shorter even than was anticipated a month ago. While this business is, on the whole, satisfactorily conducted, there is yet room for its further extension, if shippers will only pay particular attention to the selection of the fruit. So far, the apples which have arrived here this season are poor in quality, and, while there is no doubt that subsequent shipments will prove to contain better fruit, the first shipment is apt to leave a bad impression on the buyers. The Canadians, on the other hand, are paying careful attention to selecting their fruit, which is bound to tell in their favor. The trade is looking forward with interest to the shipments of apples which are being made from California. These apples are coming, for the convenience of stowage, in boxes instead of barrels. The imports for the year 1897-98 have shown a very great decrease compared with 1896-97; in the latter year, owing to the exceptionally large crops in the United States, about 1,600,000 barrels arrived at Liverpool from the United States and Canada, whereas this season only 490,138 barrels were landed here.

Experimental shipments of tomatoes have been made to this market from the United States, but so far have proved a failure. In two instances, the tomatoes were brought in the steamers' holds—not in refrigerators—and on arrival were bad and not fit for consumption. In another case, they were shipped in refrigerators, and, being pulled before they were ripe, they did not ripen in the cold temperature. When they were put on this market, they showed no signs of ripening, all the vitality appeared to be gone, and they were without flavor.

The Canadian Government is making arrangements to ship tomatoes, peaches, etc.

There are no American sugar melons here, the supplies being received from Spain and Germany. I understand, however, that a shipment is expected shortly of Rocky Ford melons from Colorado, and, as these are small and of a delicious flavor, it is anticipated that they will sell well, provided, of course, the price is not too high.

CANNED GOODS.

The Californian canned fruits still hold the market here in this line, and the sales are increasing. Complaints are made that in most of the fruits there is a metallic taste, extracted from the tin by the acid. A trial has been made of enameling the inside of the tins, but it was not successful. The tins are handled a great deal in packing and unpacking them in the cases, and when, as it often happens, they receive a knock and are crushed, the enamel inside collapses and the fruit is spoiled. I have seen a sample tin inside of which is fitted an earthenware vessel into which the fruit is put. So far as the condition of the fruit on arrival is concerned, it answers the purpose splendidly; but it greatly increases the weight and size of the tin in comparison to the quantity of fruit, and the cost practically prohibits its use generally. Still, some people will pay the increased price to get the delicious flavor of the fruit. It is felt, however, that something is wanted in the way of lining the tins that will prevent the acid from coming in contact with it. Spain and Italy compete keenly with American tinned tomatoes.

IRON AND STEEL.

This trade has been particularly good during the past year, especially in machine tools. A short time ago, I paid a visit to the technical school at St. Helens, the great chemical center, which is within this consular district. I found that the principal tools, both machine and hand, were of American make, and the mechanical superintendent told me that they were used because they were undoubtedly far superior to any of English manufacture.

A suburban town is constructing new waterworks. Tenders were invited for iron supply pipes, and the contract was awarded to an American firm, as the price was 5s. (\$1.21) a ton less than the lowest English tender.

BICYCLES.

The sale of American bicycles has increased enormously in this district during the past year. An American bicycle of the highest grade could until recently be bought for \$25 cheaper than an English

bicycle of the same grade. There were two reasons for this: First, the English bicycle manufacturers do not use up-to-date machine tools, and the output of the workmen is far less than in America; second, there has been a combination among manufacturers and dealers over here to keep up the prices of English machines. So keen has the competition become that within the last month (September) there has been a great tumble in the prices of English bicycles.

TRADE OF HULL WITH THE UNITED STATES.

The following extracts are from the annual report of Consul Smyth, of Hull, which will be printed in full in Commercial Relations, 1897-98:

The Eastern Morning News, a very reliable authority on the commercial situation in this section of England, in a series of interesting articles on the trade of Hull for the year 1897, points out as one of its most striking features a remarkable expansion of trade relations with New Orleans and neighboring ports for that period. Referring to this, it says:

Undoubtedly the most interesting feature in the trade of the port has been the development of the trade of Hull with New Orleans and the neighboring ports. When the cotton-spinning mills were in full operation a generation ago, the finest vessels that came to Hull were the sailers from New Orleans and Mobile. Their cargoes were generally cotton, though they did bring some grain at times. Now the chief importation is maize, the consumption of which in this country is ever growing. The largest cargoes which have come into Hull this year have been those of maize. Although our imports of maize show an increase when compared with last year, the increment is not so very large—some 60,000 quarters, requiring 6,000 register tons of shipping. But New Orleans has not only sent us maize, but vast quantities of wheat; while the later steamers also brought considerable quantities of cotton. Messrs. Wilson sent one of their large steamers to New Orleans in the late autumn, returning at Christmas time with some 4,000 bales of cotton and a large quantity of wheat and other produce. Hull is a great transshipment port for cotton, but probably that cotton would not have been sent to Hull had grain steamers not been on the berth.

The following item is significant in its bearing on the future of the iron and steel trade of the United States:

Messrs. Wilson's New York trade continues to display remarkable features. Armor plate, manufactured in America for the fortifications of Russian cities, continues to arrive, while large quantities of American slates are also being brought by these ships.

* * * * *

The chamber of commerce has issued its annual report of the trade of Hull during 1897, and concludes by giving statistics of some of the principal imports into

Hull during the past few years. It may be convenient here to give some of these figures:

Grain.

Year.	Wheat.	Barley.	Oats.
	<i>Quarters.</i>	<i>Quarters.</i>	<i>Quarters.</i>
1897.....	2,456,359	410,537	335,052
1896.....	3,073,729	679,081	298,094
1895.....	3,479,530	549,224	254,887
1894.....	2,850,375	896,585	308,602
1893.....	2,346,184	717,405	215,335
1892.....	2,317,389	354,868	324,930
1891.....	2,420,084	476,808	390,392
1890.....	2,024,538	514,954	198,737
1889.....	2,112,699	437,846	517,376
1888.....	1,985,744	823,563	439,824
1887.....	1,406,410	410,118	303,884

The arrivals of wheat have come from the following countries:

Countries.	1894.	1895.	1896.	1897.
	<i>Quarters.</i>	<i>Quarters.</i>	<i>Quarters.</i>	<i>Quarters.</i>
United States:				
Atlantic	740,530	440,270	427,386	598,380
Pacific	618,441	837,625	573,530	525,976
Australia	146,242	65,660		
Bombay	74,170	119,469	57,791	
Calcutta	15,684	33,571		
Chile.....	4,423	7,937	9,688	
Egypt.....			3,719	
Germany	44,370	40,786	69,360	57,025
Kurrachee	422,140	712,551	173,079	71,200
Russia	748,319	1,017,866	947,222	940,750
Roumania	16,826	162,211	621,678	131,313
Turkey		15,510	163,319	110,666
Sundry.....	19,230	26,074	26,957	21,049
Total	2,850,375	3,479,530	3,073,729	2,456,359

We received, in 1897, 312,000 quarters less from the Pacific coast of the United States than we did in 1895. This has been partly compensated for in an increase of 160,000 quarters from the Atlantic United States ports; still, the loss from the United States is over 150,000 quarters in the two years. From Australia the loss is 5,000 quarters, while from India the loss is just under 800,000 quarters. Russia, in the two years, has decreased 70,000 quarters, but there has been an increase in Roumania and Turkey of 65,000 quarters.

So far as human foresight can discover, it would seem that there is much hope for the future. Neither India nor Australia can be worse, and, therefore, any alteration must be for the better; while, on the other hand, America is preparing to pour into his country so vast a quantity of wheat as to be quite unprecedented, and of this wonderful export Hull is sure to have at least its full share, if not a little more.

Despite the ever-increasing arrivals of maize from the United States, the imports this year are somewhat less than last year; but the difference only amounts to what is equal to one respectable cargo. Still the import is double that of 1895. Considering the number of vessels already fixed to come to Hull from the maize

ports of the United States, it may be safely anticipated that this important branch of the trade, requiring 75,000 tons of shipping, will this year more than hold the advantage already gained. Beans for the last few years have gradually dropped each year from 297,249 quarters in 1894, the highest on record, to 109,083 quarters in 1897. There has been considerable decline in the imports from Alexandria, whence comes our chief supply.

SCOTCH OPINION OF UNITED STATES GOODS.

In this market, American manufactures, with few exceptions, are regarded as above the average in point of quality. To be more specific, the articles of American make sold here, either to a large or a limited extent, have gained acceptance on account of quality rather than on account of comparative cheapness; they are better for the money than like articles produced here or on the Continent. It is distinctly true, therefore, to say that our products have obtained favor in Scotland and are gaining favor on their merits. Wherever one goes in this country he finds the opinion prevailing that American manufactures and other products are up to the best standard. Generally speaking, it is considered in Scotch communities that to say an article is American is to commend it. The exceptions are not yet conspicuous and are confined to certain grades of bicycles thrown on the market a year or two ago which tended to damage the American bicycle trade here.

Our manufacturers and other producers may well be proud of their reputation on this side. In food products and in general lines of wares, there are few dealers who do not comment upon the high standard of the articles they receive from the United States. For example, a wholesale grocer who has handled American tomato catchup, chili sauce, and similar goods for many years, when recently at this consulate to make the necessary declaration for returning a small quantity—about \$100 in value—remarked:

A portion of the last shipment was damaged in some way. This is the first time I have ever sent back any American goods. They have been uniformly first class. These articles made in the United States are better than the French and are much preferred by the public.

A dealer in machinery informs me that he has never yet had reason to complain of a failure on the part of an American manufacturing company to properly fill a definite order for an article which was in their line of production. His only criticism is that now and then a firm or company which does not make the article wanted will either send or propose to send something else "to see if it will serve." That, he says, is always a blunder.

In the interest of American trade in Scotland, it is a matter of the

utmost importance that our manufacturers maintain the reputation they have earned for high quality of material and workmanship. Perhaps there is no other market where good quality counts for more than it does here. It is the essential thing, and, if united with a moderate price, it secures trade. Finish may be quite important, but the chances are that a bad article well finished will have a scant sale and soon drop out. To gain a profitable trade in this country and to hold it, a manufacturer must offer an article of solid merit and keep it up to the original standard. Finish and what is rather indefinitely termed "style," and anything else designed to render wares attractive, are of permanent use only in helping the sale of an excellent article. I doubt if any American manufacturer would profit in Scotland by lowering the grade of his product to meet competition in the price. On the other hand, if he keeps up the grade, his rival, whether English or continental, who resorted to the "cheap and nasty" tactics would be the loser in the end.

RUFUS FLEMING,

EDINBURGH, *December 15, 1898.*

Consul.

EXTENDING AMERICAN TRADE WITH GERMANY.

In reply to a Western editor, Consul-General Cole, of Dresden, under date of November 18, sends the following in regard to the methods of extending American trade with Germany:

An avalanche of circulars, catalogues, etc., printed in English, are sent to Germany annually; they can not be read and are therefore consigned to the "basket." Circulars should be printed in German, and good German from both grammatical and technical standpoints. Some which are sent here from the United States are not only unintelligible, but ridiculous. Illustrations of the machine or article should be given, with full description of its construction, operation, advantages, range of work, and application. Net and gross weights should be given in kilograms and not in pounds, dimensions in meters and centimeters, pulley diameters and widths in centimeters, and speed in turns per minute. The capacity of the machine per hour and the character and cost of the labor required to operate it are also necessary factors. The price should be given free on board ship at New York, Boston, Philadelphia, or Baltimore. Many circulars give prices at some inland city, and the cost of transportation to the seaboard is often greater than the freight charges from New York to Bremen or Hamburg. Shippers should secure bills of lading from the ship, if sight draft is made with bill of lading attached. Sight drafts are frequently made upon a bill of lading issued by the

railroad company at the original point of shipment, and, as the consignee does not know the American seaport from which the property started, he is unable to form any idea as to when he will receive the goods and can not trace them in cases of detention, which are frequent.

In all cases, postage on letters, circulars, etc., should be fully paid. When not fully paid, the recipient is charged double rates on the amount due, and this often results in his refusal to accept. Letters should be plainly addressed, for very few of the German post-office officials can read English, and addresses ought therefore to be as plainly written as possible, so as not to increase the difficulty.

I would warn American manufacturers against sending their machines, and especially blue prints of them, or even descriptive circulars, to Germany before securing letters patent here. The average German is not slow in discovering merit whenever it is apparent, and is prone to adopt any new labor-saving inventions not fully protected.

My experience of about one year at this post leads me to think the best way to increase trade in Germany is to send an agent who can speak the language and has the time and patience to deal with these proverbially slow, cautious, and economical people. The next best plan is to employ a local agent who will, by advertising and constant solicitation, keep the goods before the public until fairly introduced. After a foothold is gained for any meritorious invention, the trade will grow without much further effort or expense.

American manufacturers should understand that machinery should be either labor or fuel saving, or have some other peculiar merit, if they wish to succeed here. I am frequently asked to furnish the names of purchasers of steam engines, or other standard machinery, by parties in the United States who do not seem to understand that such machinery is made as perfectly and as cheaply in Germany as anywhere in the world. This is true of electrical machinery, iron and steel beams, bridge material, locomotives, and many standard articles of iron and steel manufacture.

The German will purchase his home product, unless our people can offer him unusual advantages in the way of price or quality. Just now, he is a little sore because a large American trade, built up under the Wilson tariff, has been sadly reduced by the Dingley tariff and the war, and he is not disposed to buy where he can not sell; but the feeling can be overcome. The hostility felt toward Americans during the war, as expressed in the newspapers, is being replaced by a more friendly feeling.

I am satisfied there is a good field in Germany for American enterprise; and, in pointing out some of the difficulties our people must meet, it has not been with the view to discourage them.

GERMAN COMBINE AGAINST AMERICAN BICYCLES.

Failing to obtain from the Imperial Government the prohibitory import duty on American bicycles which they have so earnestly and persistently demanded, the members of the German Bicycle Manufacturers Association have decided upon the following simple but ingenious plan to kill the American cycle trade in this country. From this time forward, they will unanimously refuse all credit to any dealer who handles, as part of his stock in trade, a bicycle of American origin.

The probable effectiveness of this measure will be readily inferred from the fact that the association includes in its membership nearly one hundred of the most important bicycle makers in Germany, who have been accustomed hitherto to give to retail dealers from two to four months' credit, and very liberal terms in respect to parts and materials to be used in fulfilling guaranties and making repairs. Under this system, men of energy and tact have been able to turn their money over rapidly and do a large business upon a comparatively small capital. Henceforward, if a dealer in American bicycles wishes to adapt his stock to all classes of purchasers by keeping in his assortment a German-made wheel, he must pay cash for what he has hitherto easily and cheaply obtained upon long and elastic credits.

Since the majority of independent bicycle dealers in Germany are in close business relations with, and under personal obligations to, one or more manufacturers, it is expected that the effect of this heroic policy will be to seriously injure the sale of American bicycles, unless exporting manufacturers in the United States take an aggressive attitude, and, by extending and broadening their system of credits and backing up their best retail agents vigorously, make the competition so hot that the German makers, many of whom are laden with unsold wheels brought over from last season, will be compelled to make peace by rescinding the present decree.

DEAN B. MASON,

Vice and Deputy Consul-General.

FRANKFORT, *December 21, 1898.*

AMERICAN DRIED FRUITS AT THE GERMAN FRONTIER.

Early in October last, the German newspapers contained a press telegram from Hamburg, announcing that eggs or larvæ of the San José scale (called in German "Schildlaus") had been discovered in a shipment of dried pears of California origin. On the 28th of the same month, a similar report appeared, stating that the scale had also been discovered in a consignment of dried California nectarines. So far as was then reported or can now be ascertained, no evidences of San José scale have been found in any American dried peaches, apricots, or prunes, although all those fruits come from the same districts as pears and nectarines, and are similarly dried in a natural condition—that is, without being pared.

In consequence of these discoveries, the regulations which govern the inspection of imported fruits have been sharpened and are so enforced as to require the official examination at the frontier of not only fresh, but all dried fruits as well. It is conceded that the scale can only deposit its eggs on the outside or skin of the different fruits, and therefore fruits which have been pared in the process of curing are admitted freely without microscopic inspection. But as nothing is taken for granted by the officials in this country, it is necessary to prove conclusively in each instance that all the dried fruit in any given shipment has actually been peeled, and for this purpose it is required that not less than 10 per cent of the boxes in each shipment shall be opened. If the fruit is thus found to have been pared, it passes without further formality; if not, it is submitted to the prescribed microscopic inspection.

In consequence of the trouble and delay involved by such examinations, the Rhine steamship lines having their termini at Antwerp and Rotterdam have since the 5th of November refused to receive as freight dried fruits of American origin. Carrying freight of that class would involve the stoppage of the steamer at the frontier river station of Emerich and the landing and examination of a portion of each lot, which would entail handling and loss of time that would overbalance the freight value of the merchandise.

But as large quantities of American dried fruits were already purchased and in transit to this country via Rotterdam and Antwerp, and as these shipments could not be stopped en route, it has been necessary to ship them to the interior of Germany by rail, with inspection at the frontier stations Venlo and Herbesthal. This entails an important increase in the cost of such importations, as follows:

For freights of the class to which dried fruits belong, the average

rate by river steamer from Rotterdam or Antwerp to Frankfort is 1 mark per 100 kilograms, or 10 marks (equal to \$2.38) per metric ton of 2,204.6 American pounds. The rate by rail, on the other hand, from the ports named to Frankfort is 30 marks, or \$7.14, per ton in carload lots of not less than 10 tons each. For less than a carload, the rate is from 5 to 6 marks per 100 kilograms, or from \$11.90 to \$14.28 per ton, besides the cost of inspection.

The exact cost of handling and official examination at the frontier railway stations can not yet be definitely ascertained, and no customs official in Frankfort can give any precise information on this point; but at Hamburg, where the whole inspection process has been best and most liberally systematized and provided for, the cost is 20 pfennigs (equal to 5 cents) per package—hardly more than the bare cost of handling and opening. The effect of present conditions will be to concentrate the import of American dried, as well as fresh, fruits into Germany at Hamburg, the principal seaport of the Empire, where all mercantile operations are conducted on as broad and liberal a scale as is possible under existing laws.

Meanwhile, great interest has been aroused in commercial circles by the announcement from America that the Department of Agriculture at Washington has demonstrated by experiment that the vitality of the San José scale is effectively destroyed by each of the several methods of commercial drying practiced in the United States as applied to apples, pears, peaches, apricots, prunes, and nectarines, viz, sun drying and artificial evaporation, with or without the use of sulphur. The allusion to this subject in the annual message of the President is generally accepted here as proof that the demonstration is already definite and conclusive, and hopes are expressed that no effort will be spared by the Government of the United States to convince the Foreign Office, and through it the Imperial Government, that the San José scale on American dried fruits is as dead and innocuous as the trichinæ in thoroughly salted and cured American pork.

In so far as defensive measures are applied to trees, cuttings, and plants from the United States, the Government here is fully sustained by public opinion, for the San José scale is a disastrous pest, against the encroachments of which every government should defend the farms and orchards of its people to the last extremity. But how dried fruits which go from the packing box at the grocers' to the stew pan in the kitchen can carry danger from a germ so microscopic and inert as the egg of the Schildlaus is not so clear.

It is only when the supply of American fruits is obstructed or cut off by any artificial restriction that the vast importance of this trade to both countries can be generally realized.

FRANK H. MASON,
Consul-General.

FRANKFORT, *December 9, 1898.*

INSPECTION OF MEAT IN GERMANY.*

The subject of official inspection, in its relation to so great an industry as that of slaughtering cattle and preparing meat for export, is one of exceptional importance. Much complaint is said to have arisen in the United States concerning the vexatious regulations in Germany hindering the import of meat from America. Anything which would contribute to the removal of these hindrances can only be for the benefit of both nations, in taking away unpleasant causes of irritation. There is no question that the agricultural interests of Germany, called the "Landwirtschaft," are as active in trying to preserve their home market as the farmers and cattle dealers of other countries are anxious to share it. Under the benevolent plea of protecting the public health, no doubt much labor is given to discover defects in meat which is perfectly wholesome. It is claimed in Germany that the system of inspection of meat adopted by the United States can not be relied on; that while there is a national inspection law, the manner in which it is carried out is not satisfactory. Correct knowledge here of the scope and features of the law is wanting. Complete ignorance seems to prevail as to the new system of microscopic inspection introduced in the United States. It is said that at some places in Germany, meat is brought into the country which has not been inspected, and a new inspection law is to be proposed at the next meeting of the Reichstag, or imperial parliament, which takes place at the end of this month or the beginning of December; and that this new law will apply to the whole of Germany, and will prevent the introduction of meat which has not been inspected. The Brunswick Anzeigen, the official organ of the Duchy, in its issue of November 21 last, has an editorial on the features of this new legislation, and at the same time severely criticises the methods of inspection in the United States. The article is as follows:

The details as to the provisions of the meat-inspection law framed for the consideration of the Reichstag are not yet known; but the purpose of the law is no secret. Directions are to be issued for the administration of an inspection law which, if possible, will be obligatory in its operation throughout the German Empire. It is understood that we must apply the same to foreign meat products. For months past, the American press shows itself uneasy over the proposed law, the purpose of which, it is said in America, is merely the exclusion of American meat products from the German market.

The United States may be convinced, should the proposed law subject the American imported meat products to more stringent inspection than hitherto, that the latter would be no severer than the one applied to domestic meat products.

* A copy of this report has been sent the Department of Agriculture.

American imports are already subject to examination at the port of entry. Under the universal provisions of the new law, the investigation will occur at all places of entry; hitherto, American meat products could cross the German boundaries at certain places uninspected. If the United States should cause an inspection law to be adopted for meat products destined for export, it should arrange it in such a way that it would be impossible for German officials anywhere to find goods injurious to public health. Germany has hitherto regarded the American meat inspection as a federal arrangement, although Congress certainly has no authority to issue a national inspection law. In fact, the stamp which the imported American meat products bear does not prove that the latter have been subjected by the Government to a police health inspection; it is only a label which the Government official sticks on, after the exporting slaughterhouse owner has given him the assurance that the goods have been inspected. The Americans have many reasons to avoid an inspection of their meat destined for export. Nevertheless, they do not cease to dispute our right to inspect their goods as carefully as we do our own.

The lack of knowledge of our institutions and laws displayed by this article in an official organ is surprising. The editor is ignorant that under the power granted by the Constitution of the United States to regulate commerce, Congress has the authority to pass an inspection law applicable to commerce between the several States and with foreign nations; that in pursuance of this power the inspection law of March 3, 1891, was passed and the Bureau of Animal Industry established under the direction of the Department of Agriculture; that the strictest system of inspection is observed by the officials of this bureau. Not only are the cattle inspected before slaughtering, but their carcasses undergo a microscopic examination afterwards with instruments and appliances of the most approved kind. The inspection which he criticises is a national inspection, relates directly to meat intended for export, and has nothing to do with local police regulations for health, which are under the supervision of the different States. The same erroneous impression as to the character of the inspection law of the United States doubtless exists elsewhere in Germany and on the Continent, and as the commercial representative of the Government I have deemed it my duty to call attention to it. The rules of inspection at Brunswick are most stringent. Every package of meat, domestic or foreign, which comes into the city undergoes an official inspection at the slaughterhouses. No attention whatever is paid to the marks, brands, or stamps on a package of meat, and it is somewhat mortifying to consular pride to have the certificate of the official inspection by the Government treated with absolute indifference.

BRUNSWICK, *November 25, 1898.*

TALBOT J. ALBERT,
Consul.

SCARCITY OF MEAT AND BREADSTUFFS IN GERMANY.

The restrictions imposed by Germany upon the importation of meat are producing the results which might be expected. There is a loud outcry from all parts of the country about the high prices and scarcity of meat. This complaint is well illustrated from the following extracts from articles which have appeared from time to time in the Brunswick Landeszeitung. This journal is reliable and bases its statement largely upon reports contained in other trustworthy newspapers. On October 11, the Landeszeitung comments editorially upon the high price of meat as follows:

Not only in the north of Germany, but also in the south, the prohibition of the import of cattle has driven the prices to an extraordinary height and caused great discontent among consumers. This is shown even in papers which are favorable to the agricultural interest and have supported it. In the Munich Allgemeine Zeitung, an expert proves that the prohibition is not necessary, and that diseases would not be brought in. In Bavaria, the number of cattle for slaughter has diminished so greatly that the demand can not be supplied. This has been caused by the increased consumption of milk. The farmers are raising cattle for milking, almost exclusively. It is much easier work than breeding cattle for slaughter.

Whether the agricultural interest will be able to supply the demand in both directions is a question of the future. One can ask any housewife, especially in the poorer classes, and learn that the consumption of meat is already reduced to a minimum. A real calamity is the high price of pork. This was distinctly shown in a report of the city council of Karlsruhe, which has led to a unanimous resolution to request the city government to urge the abolishment of the frontier laws against the importation of cattle.

On October 23 the following article, stronger even than the one just quoted, appeared in the Brunswick Landeszeitung, entitled "Our agriculture and the price of meat:"

With great anxiety many poor families, who are compelled to live from hand to mouth, look forward to the approaching winter. At present, wages are good and the opportunities for employment yet plentiful; but how will it be if the winter is hard and the demand for employment ceases, when, even now, in consequence of the unnaturally high price of meat, distress makes itself felt? According to the representation of a physician who was commissioned by the city officials of Beuthen to investigate the interdiction of swine and its effect upon the means of support of the workingmen, the use of meat among them has diminished one-third, and when ever a piece of meat comes on the family table it is so small that it only suffices for the satisfaction of the man. The present conditions will work an injury to the capacity for labor and the power of endurance of the growing generation. Not quite so bad, it must be acknowledged, are the conditions in Brunswick; but still they are such that the petition of the Butchers' Union to the Reichstag for the removal of the existing laws affecting the price of meat should find many signatures in our dukedom. Several years ago, the price of a kilogram (2 pounds 3 ounces)

of swine flesh in Upper Silesia was from 13 to 15 cents; in August, 1895, it already reached 26 cents; and after small fluctuations, has risen, in September of this year, to 37½ cents. The records of the cattle yard of Beuthen show that 34,342 foreign and 2,806 domestic swine were slaughtered in 1896. In 1897, 27,231 foreign and 3,411 domestic swine were killed; and in the first half of the year 1898, 13,268 foreign and 1,939 domestic swine. In official statistics, it is shown that in the United States there is a supply of 39,000,000 swine for 74,000,000 inhabitants, which allows one animal for two Americans, and the ratio of one to four with us does not answer to the demand.

The petition of the German Butchers' Union, located in Lübeck, referred to in the last extract, is given below in part:

On account of the difficulty of importing live foreign cattle for slaughter, great distress has been brought upon the population of Germany. In consequence of the exclusion of foreign cattle, the supply is less than the demand and, for this reason, an increase in the price of meat has been produced. Owing to the scarcity of meat, a large quantity of inferior variety, which at other times would hardly have been salable, has been put upon the market. Further, the diminished supply of fresh meat has so increased the importation of prepared American products that the amount for the last year is double that of the preceding year. In the first seven months of 1897, it amounted to 20,389,600 kilograms (44,950,000 pounds) and in the first seven months of 1898 to 44,232,800 kilograms (97,332,000 pounds). There is a great disadvantage in this, because these products can not be controlled; they are considerably inferior to the German in quality, and their use is to be discouraged on sanitary grounds. The regulations concerning the importation have caused a deterioration in quality as well as an increase in price in meat supplies, operating to the disadvantage of the population of moderate means. We are not mistaken when we recognize agriculture as one of the most important industries in the German Empire, and we agree wholly with the Government that it should be protected; but we regard it as an injustice that such protection should be at the expense of the poorer city population. An honorable vocation, the Butchers' Union, is keenly damaged and its existence is threatened because the price of cattle rises on one side and, on the other, the American importation makes it impossible to raise the retail prices. One part of the Union will make their living by degrading themselves into dealers in American meat. By the removal of the butchers, who can not work much longer without profit, the great business of slaughtering cattle will be driven into the hands of a few capitalists, and Germany will be brought into the same situation as America, where four great dealers dictate the prices for cattle.

Therefore, the undersigned make the request to the representatives of the Reichstag to give particular consideration to this question, that the importation of living foreign cattle shall not be made more difficult than shall be necessary for sanitary reasons, and that the imported foreign-meat preparations shall be so examined at the frontier that the person with moderate means can consume his meat with an appetite and without fear for the health of his family.

The example of the butchers of Lübeck has been followed by their brethren of Berlin, who have also presented a petition to the Imperial Chancellor. On November 11 last, the city council of Brunswick passed a resolution that the authorities of the dukedom take appropriate action to open the frontiers of Germany for the importation of healthy cattle for the purposes of slaughter.

With regard to the other great staple, breadstuffs, there appeared the following article in the *Landeszeitung* of November 8:

For a long time, there has existed a dispute as to whether the German agricultural interest is still able to produce the necessary breadstuffs for the German population. It has been calculated that the 53,000,000 inhabitants of Germany consumed in the harvest year of 1897-98 10,345,252 tons of bread; according to another calculation, an average of 188 kilograms (414½ pounds) per head in a year, which numbers may represent the maximum of consumption. Can we have harvested so much lately? The harvest statistics dating back twenty years furnish us with a pleasant proof that our grain harvests are constantly increasing, and that since 1878 there has never been harvested so much breadstuff in the German Empire as in the last five years, whose produce has surpassed that of the former periods by 1,700,000 tons. In spite of the increase of 11,000,000 in the population during the last twenty years, a greater per capita quantity (420 pounds) of breadstuffs was raised from 1893 to 1897 than for the period from 1878 to 1882 (400 pounds), or 1883 to 1887 (396 pounds). It is therefore concluded that German agriculture is in a condition to provide the German people with nearly the whole of the breadstuffs necessary for their subsistence, if the grain product at home is used for this purpose. He who observes how the better culture of the soil makes great progress everywhere, and how the smaller owners, by the use of fertilizers, increase the product in an unexpected way, will also admit that our German soil is able to supply in future the German nation with all the necessary breadstuffs. Good and cheap routes for commerce, especially canals, are of first consideration in keeping open a market for this grain; then the need for foreign grain will diminish greatly, and Germany can continue to gain the market of the world with its industrial products.

It is apparent from these extracts that the population in Germany is increasing more rapidly than the means of subsistence. In regard to the supply of meat, there can be no question about this. Germany can not supply the demand. In the matter of breadstuffs, under improved methods of fertilization and cultivation, it is hoped by the sanguine that the supply may meet the demand; but in the figures given above, human consumption of breadstuffs alone is considered, and no allowance is made for the consumption of cattle and poultry and the grain used in the manufacture of spirits. In my opinion, Germany is rapidly reaching the same position held by England before the abolition of the corn laws. Under the influence of a protective tariff, industrial enterprise has increased immensely. Germany now rivals the United States and England in manufactures; but, unlike the United States, it has not the provisions and breadstuffs for its home consumption with a surplus for other nations. Germany presents an admirable field for studying political economy, and it is a surprise that a German Malthus or John Stuart Mill does not arise.

TALBOT J. ALBERT,
Consul.

BRUNSWICK, *December 9, 1898.*
No. 222—6.

MARKET FOR AMERICAN COLORS IN GERMANY.

The following table, giving the total import into Germany of paints and colors for the year 1897, may be of value:

Variety.	Total im- ported into Germany.	From America	
		Quantity.	Value.
	<i>Kilos.*</i>	<i>Kilos.*</i>	
Lead colors.....	104,800	4,200	\$952
Lac and varnishes.....	810,600	116,100	66,402
Calcimine.....	157,000	10,200	2,618
Oil varnish.....	798,509	13,600	952
Aniline colors.....	991,500	1,600	1,428
Zinc white.....	3,531,900	294,300	25,228

* 1 kilogram=2.2046 pounds.

The statement is made that American colors are preferred; that they are from 15 to 20 per cent cheaper than the German ones, but that in quality they are poorer. This is from official sources. The samples of so-called lead colors are no doubt what they are represented to be, but the consignments do not equal the samples.

Nearly all of the zinc white comes from Belgium, and is extensively used in interior decorative work, this style being preferred for ceilings. Most of the city and village houses are heavily coated with paints upon the exterior, various shades of drab, gray, dun, pearl, and the like being common. Red bricks are practically unknown, and the roofing is either slate or tile; no tin roofs, with the exception of those for factories, being used.

The following are among the chief manufacturers of colors in Germany, not including various smaller aniline dye and color works: Badische Anilin und Soda Fabrik, Ludwigshafen-am-Rhein; Farbwerk, Friedrichsfeld; H. Huber, Munich; Vereinigte Ultramarinwerk, Nuremberg; Rheinische Bleiweisfabriken, Aix la Chapelle; Gebrüder Fass, Aix la Chapelle.

There are at least fifteen dealers in paints and colors in this city, and one firm—Messrs. G. P. Doll & Co.—is willing to receive consignments on trial (in competition with native products) and to sell on commission, if they are found equal in price and quality to the German product. This may be advisable after American agents have gone over the ground in person and demonstrated the qualities of their goods.

Transportation from Rotterdam to Mannheim by boat is consid-

erably less than by rail, being about 33 cents per 100 kilograms (220.46 pounds) when in various small lots, 27 cents per 100 kilograms when in lots of 5,000 kilograms, and 26 cents per 100 kilograms when in lots of 10,000 kilograms.

The duty is 20 marks (\$4.76) per 100 kilograms.

WALTER J. HOFFMAN,

MANNHEIM, *November 22, 1898.*

Consul.

LEATHER MANUFACTURES IN GERMANY.

In the whole record of industrial development in Germany during the past four years, there has been no feature more striking and significant than the progress of the tanning and leather industries, which now rank about fourth in the productive interests of this country. As early as 1895, no less than 596,717 persons were engaged in tanning and the manufacture of shoes, leather gloves, belting, and saddlery, and the value of leather consumed annually by the German people exceeds \$100,000,000, exclusive of exports, which amounted during the first eight months of 1898 to 8,744 tons and average in aggregate annual value \$50,000,000.

Special branches of the leather industry are concentrated at different points, as, for instance, the manufacture of shoes at Pirmasens, Weissenfels, and Tuttlingen; purses, bags, and a vast assortment of fine leather goods at Offenbach, Frankfort, and Hamburg; and tanning at Worms, Strassburg, Siegen, Barr, Malmedy, and Paknang, as well as in the vicinity of Hamburg. There are in Alsace-Lorraine alone eighty-two tanneries, a single one of which—at Strassburg—employs 250 workmen and tans 60,000 hides per annum. The hides tanned in Alsace-Lorraine are of domestic origin or are imported from North and South America and from India; the material used is largely the very superior white-oak bark furnished by the forests of the Vosges; but in later years, imported forms of tannic acid, quebracho, palmetto, and gambier, as well as chrome, have been introduced there and now play an increasingly important rôle. This whole subject derives an especial interest to Americans from the fact that the German shoe and leather industries are in a state of transition from the slow and primitive methods of hand labor to the most modern forms of chemical tanning and shoe production, and because this transformation consists largely in the adoption of American methods and machinery.

The importation of American leather to Germany, which began soon after the last world's exposition at Vienna, has increased steadily until there are now in Frankfort alone eleven firms which import

and deal more or less exclusively in shoe, glove, and harness leathers from the United States. As this leather is made largely from hides and skins imported originally from Europe, its high quality and the fact that it can be exported from the United States and sold at a profit in this country, notwithstanding the German tariff, showed the German tanners how far their American competitors had outstripped them in the race for cheap and superior production, and set before them a lesson which they have been quick and eager to learn.

A leading New England manufacturing company, which turns out exclusively high-class tanning machinery, has been compelled to enlarge its plant to meet the heavy demands from its European agent, who, beginning three years ago with an office in Frankfort, has now extended his trade throughout Germany and into Austria, Italy, and Russia. Leading German tanners have visited the United States, and, being everywhere freely admitted, have studied carefully and intelligently American processes and machines; and numerous expert workmen and foremen, skilled in the use of chrome, quebracho, and palmetto, have come to this country and received large compensation for teaching their arts to the native tanners. In addition to all this, the tanning industry in Germany enjoys the important natural advantages of an abundant supply of hides and skins of the best qualities, cheap and profuse tanning materials, advanced chemical skill at wages less than those of manual labor in the United States, abundant capital at 3 and 4 per cent, manual labor that costs on an average 15 marks (\$3.57) per week, and a home market adequately protected and open to the import of foreign-made machinery at a nominal duty of 71 cents per 100 kilograms (220 pounds).

The German tanner has not only all these points in his favor, but, what is perhaps still more important, his home market is one of extraordinary capacity. The consumption of leather in Germany is almost phenomenal. Notwithstanding the enormous increase in the home-tanned product, the imports of leather are now greater than ever before. Several of the largest tanneries in the Empire have either been built during the past two years, or wholly reorganized and equipped with American machinery. In this immediate neighborhood is an establishment which turns out about 800 dozen glazed chrome kid skins per day. Another large tannery has been converted by an expert from New York into a stock company with a large capital and modern American equipment; Messrs. W. Becker & Co., of Milwaukee, are just finishing a new tannery near Frankfort, where they will in the future manufacture the leather to supply the large trade which they have built up in Germany with leather heretofore imported from Wisconsin.

Precisely similar in motive and method is the revolution which is going on in the shoe-manufacturing industry of Germany—likewise being Americanized and improved in an extraordinary degree. Three years ago large quantities of cheap and generally inferior shoes were imported into Germany from Italy and Austria, a few of better grade from England and Switzerland, and a small quantity of the fine, high-priced work of Pinet, of Paris, to supply the most exclusive trade in large cities. The product of most German factories was then of but medium quality, lacking in style and costly out of proportion to its merits. The American factory-made shoe then appeared, first as a model discreetly imported by the better class of manufacturers and used for the guidance of their operatives. Later, a few of the more enterprising American manufacturers sent salesmen with samples, who made small sales to retailers, especially in such German cities as have a large permanent American colony. The handsome and highly finished imported shoes attracted immediate attention and were sold rapidly; but, as no provision had been made for keeping up the stock except by repeated orders sent to the United States, which required from two to three months to be filled, the trade naturally languished. Retailers as well as their customers were pleased with the American shoes; but, as they are for the most part merchants of small capital, ignorant of the formalities of importation, timid about paying in advance for goods which they have not seen, and accustomed to being supplied from hand to mouth by European manufacturers, they soon became discouraged with goods which discontented their customers with home-made shoes and created a demand which they could not readily supply.

The American shoe exporters, on the other hand, spent months in seeking for wholesale shoe-jobbing houses which do not exist in Germany, and waiting for someone in this country to organize a company or syndicate and open a wholesale depot at Hamburg or Berlin which would buy and import American shoes and supply the German retail trade. Several such schemes have been proposed and discussed, and the requisite capital has seemed easy enough to obtain; but all have failed for want of satisfactory relations with American exporters, most of whom were in doubt as to the real requirements of the market, were timid about foreign ventures, and, while quite willing to sell shoes for cash or its equivalent, have not felt disposed to risk any serious investment in such an enterprise.

It is nevertheless true that the importation of American shoes into Germany is slowly increasing, and that the value of such imports during the year 1898 will exceed those of any previous year; but, as has been justly remarked, this increase is due mainly to the fact that there is in all the larger German cities a definite demand for American

shoes, which the principal dealers find it profitable to gratify by keeping on hand a small stock which they sell for the most part at extravagant prices, the kinds sold everywhere in the United States for \$3.50 and \$4 being sold here for 26 and 28 marks (\$5.18 to \$6.66) per pair. Nor do the German retailers, as a rule, make any effort to sell American shoes unless they are specially asked for.

All this has served to convince several clever American shoe manufacturers who have been here during the past three months and have studied the situation closely, that the plan which now offers the best chance of immediate and complete success is for American shoe exporters, either individually or in combination as a syndicate, to do just what they have done in London and Paris, namely, to open in Berlin, Hamburg, Dresden, Frankfort, and other leading German cities handsome, well-located retail stores, fitted up in American style and stocked with about three grades—fine, medium, and ordinary—of boots and shoes for men, women, and youths, the goods to be advertised as American, exhibited in show windows with labels showing their prices in marks, and sold for a profit not to exceed 30 per cent above the net cost of the goods delivered at the store. This would enable a large assortment of good, medium-grade stock to be kept for sale at prices which would compete directly and effectively with the best that can be produced in Europe. At home, American shoes of good quality are not a luxury beyond the reach of people of moderate means, and they should not be made so by the rapacity of retail merchants abroad.

Meanwhile, the standard of quality in German-made shoes is advancing and improving day by day. The shoes made at Pirmasens, Frankfort, Stuttgart, and Dresden, while not yet equal in style, finish, or wearing qualities to the work of the best American makers, are far superior to what was produced in Germany a year or two ago; and thus the opportunity offered by this market to imported goods is gradually slipping away. At their present rate of progress, the German shoe manufacturers, who are now among the busiest and most prosperous employers of labor in the Empire, will be able within a few years to supply and hold their home market against all foreign competition.

What is of especial interest at this time, as an example and indication of the policy which is making Germany a great manufacturing nation, is the alert readiness and enterprise with which the shoe and leather manufacturers of this country are learning the lesson set before them at the Columbian Exposition of 1893. The chrome tanning process was originally invented by a German, but it was perfected and made industrially successful at Philadelphia. As soon as it was recognized that American tanners produced by that process

soft, pliant, and lustrous leathers which could not be rivaled in this country, the German tanners hastened to master and adopt the new method.

Every word published in CONSULAR REPORTS or elsewhere which can throw any light on American methods or results in tanning or shoe manufacture is translated, reprinted, and discussed—often disputed—in the trade journals of this country. Scores of German manufacturers and their foremen have visited Lynn, Newark, Philadelphia, Chicago, and other centers of shoe production, to study the factory system which produces such consummate results with such economy of labor, and skilled American foremen have been employed to reorganize factories and introduce American methods here. The Goodyear, Stanley, and other American shoe-machinery companies, three of which maintain large and busy agencies in Frankfort and place large quantities of the most modern machinery every year, use American-made shoes as models and maintain what are practically schools of instruction for German manufacturers and their workmen. All this is done openly and with a clearly conceived and avowed purpose. Says the chief organ of the German shoe and leather industry, the same which less than two years ago attacked fiercely a United States consular officer who had suggested that there was a field in Germany for the sale of American-made shoes:

As the Americans learn from us, so must we learn from them whenever—as is the case in different forms of manufacture on a large scale—they are our superiors. We must study their technical and mercantile methods, or cause them to be studied by competent and well-schooled experts, in order to equal or finally surpass their efficiency. In the chrome-leather manufacture, we have now reached this point, and our success in this specialty should point the way to similar progress in the shoe, bicycle, and iron industries.

FRANK H. MASON,
Consul-General.

FRANKFORT, *December 20, 1898.*

UNITED STATES SAUSAGES IN GIBRALTAR.

Consul Sprague writes from Gibraltar, December 16, 1898, that an Italian recently imported from New York sixty-nine packages of provisions, among them about 41 cwts. of smoked sausages. After selling the sausages to several grocers in this market, and while a small quantity was being offered at retail at the auction mart by one of the purchasers, the sanitary inspectors, with the approval of the medical officer, condemned the goods as unmerchantable; and immediately after, the other parties who had purchased the remainder of the lot were required to forward to the sanitary board samples of the sausages in their possession, in order that they might be examined.

So convinced was the importer that the sausages in question were in a sound and merchantable condition that he called upon the consul in the hope that he might do something in his favor, since the sausages were bona fide American meat products. Mr. Sprague continues:

I called at the office of the sanitary commissioner, and as the sausages, after examination, seemed to me to be in a sound condition, I pointed out the importance of a careful and impartial inspection before any other decided steps be taken in the matter. Soon after my departure, a formal survey took place, in which duty a justice of the peace, an old-established English merchant, took part, and the result ended in favor of the importer, who was at once relieved from any further trouble and responsibility in the matter.

This is the first time that American smoked sausages have been introduced into this market for sale, and their appearance caused some curiosity among the usual dealers in Italian sausage, owing to their cheapness. They sell at not more than three-fourths the price of the Italian article. The Italian sausage is not smoked, and is therefore more palatable, although there is greater danger of its deteriorating in this climate.

EXPORTS FROM ST. GALL TO THE UNITED STATES.

I have to report a remarkable increase in the exports of embroideries and laces from St. Gall to the United States for the month of November, 1898. During that month, they amounted to \$1,009,125. This is the largest shipment to the United States from St. Gall in any one month since the establishment of the consulate here, and it is an increase of \$439,286 over the same month of 1897. This great increase has occurred in the face of numerous prophecies made by exporters here, who claimed that the vigorous action of the custom-house at New York and the efforts of this consulate to secure the revenue to which the Government is honestly entitled would seriously diminish the exports from St. Gall to the United States. One firm, which openly declared that the export control here and the strict application of the law by the appraiser at New York would render export business from this district to the United States an impossible transaction, within the past fortnight shipped in one day to New York 250,000 francs' (\$48,250) worth of embroideries and laces, which is the largest shipment made to the United States from this district by one firm in one day during the existence of this consulate.

I have every reason to know that much of this increase represents the advances that have been made in invoice prices during the past six months, owing to the energetic action of the customs authorities at New York and the export control here, these prices having risen from 20 to 25 per cent in that period of time. This rise has established a better and cleaner condition of business, preventing in a measure unfair and unjust competition, and at the same time securing to our Government a large amount of revenue to which it was properly entitled, but which it formerly lost.

As the total increase of exports from Switzerland to the United States for the month of November, 1898, as compared with the same month last year, was only \$521,679, it proves that about 70 per cent of the entire increase occurred in the St. Gall shipments.

A member of one of the oldest and best Swiss firms has recently very frankly admitted to me that business can now be done more easily with the United States and on far more satisfactory terms.

JAMES T. DuBOIS,
Consul-General.

ST. GALL, *December 8, 1898.*

UNITED STATES AGRICULTURAL MACHINERY IN MEXICO.*

American agricultural implements are imported into Mexico, at least along the border, without competition from abroad. Our manufacturers have a clear field and a market to themselves. In addition to this advantage, the demand for United States agricultural machinery is steadily increasing. In the first place, implements for tilling the soil are better in the United States than those made in any other country. Our manufacturers have the advantage of quick transportation and moderate freight rates, and all agricultural implements shipped into Mexico are entered free of duty at the custom-houses.

President Diaz has long considered the development of agriculture the most important of the national industries. He leaves nothing undone to encourage the cultivation of the soil, which is so productive and fertile and well favored from a climatic standpoint. Already, capital is interested in various States of Mexico in the cultivation of large tracts of land, and syndicates are being organized to scientifically cultivate cocoa, coffee, rubber, spices, sugar, tobacco, cotton, and other products indigenous to the country. This means

* This report was prepared at the instance of the Exporters' Association of America, to whom Advance Sheets have been sent.

the employment of modern methods and modern agricultural machinery.

The American plow and cultivator came with the railroads, and the use of these implements is being gradually extended among the small farmers and away from the lines of communication. They are taking the place of the Egyptian wooden plow and other primitive instruments with which the Mexicans have drawn from a rich soil the source of livelihood. As the agricultural implements of the United States are substituted for the antiquated instruments heretofore employed, their use and value is appreciated, and every American plow is an object lesson indicating the possibilities of larger returns for a given amount of toil on a given number of acres.

Agricultural development means much to Mexico, as it has meant so much to the United States. It is more important to the people than the exploitation of mines and the erection of smelters. This fact is realized in Mexico, and the result is a liberal treatment of American agricultural machinery—indeed, its free admission to the Republic.

The American manufacturers should not conclude that because the implements are purchased in the United States it is unnecessary to canvass Mexico with the hope of increasing the demand. The sales of our manufacturers might be extensively increased by dispatching to the agricultural districts intelligent representatives who understand the habits and customs of their prospective patrons and the Spanish language. They must adapt their methods to those of the Mexicans if they hope to gain favor and fill their order books.

In the northern section of Mexico, and especially in my consular district, agriculture is limited to the valleys where irrigation is possible. But here the returns are excellent, experience proving that irrigation brings better results than are realized in the zones where the supply of moisture is left to the vagaries of the season.

The Mormons, who are colonizing the northern and western sections of the State of Chihuahua, follow agriculture almost exclusively. They are intelligent and, I might say, scientific cultivators of the soil. They realize satisfactory returns on their crops, and the earth is made to yield abundantly as a result of modern methods and modern devices which they apply. They use American plows, binders, and reapers and other necessary implements.

For the fiscal year ended June 30, 1896, \$30,000 worth of agricultural machinery was imported at the custom-house in this city. The fiscal year ended June 30, 1897, showed importations amounting to nearly \$50,000. There will be a material increase over this amount at the end of the present year.

The principal articles imported are rakes, mowers, harrows, culti-

vators, plows, shovels, and hoes. Hay tedders are seldom used, as the dry atmosphere and perpetual sunshine, at least in this section, cure hay very quickly after it is cut. There is scarcely a demand for lawn mowers, except in the seacoast cities and Mexico City. Agricultural implements imported for use in Mexico are the same as those used in the United States.

Manufacturers of firearms and cutlery in the United States make special export prices to purchasers in Mexico, in order to compete with European manufacturers of these objects. I am informed by importers that the manufacturers of agricultural implements do not make a special export price, but that they would secure more business if such a consideration were offered. The high rate of exchange and long distance should inspire American manufacturers to figure more closely on implements intended for the Mexican market. The demand will always increase in a section where modern implements have been once introduced.

Agricultural machinery is shipped to Mexico from St. Louis, Chicago, Louisville; Springfield, Akron, and Dayton, Ohio, and from other cities in Ohio, Indiana, New York, Pennsylvania, and the East.

Of the manufacturers whose goods come to Ciudad Juarez for distribution through Mexico, might be mentioned D. M. Osborne & Co., the Deering Company, McCormick Harvesting Machine Company, L. D. Kingsland Manufacturing Company, B. F. Avery & Sons, Whitman Agricultural Works, T. Rowland, and the Ames Shovel Company.

The outlook for agricultural implements of American make is very promising, on account of the development now taking place in certain of the Mexican States. It is an inviting field for our manufacturers, and I believe it is worthy of careful consideration, as to the best means to extend the use of and increase the demand for every kind of implement that lightens labor, while it increases the productiveness of the soil.

CHARLES W. KINDRICK,

CIUDAD JUAREZ, *December 8, 1898.*

Consul.

UNITED STATES COAL IN URUGUAY.

Consul Swalm, of Montevideo, on October 3, 1898, says:

I am gratified to be able to report that American coal has come into the River Plata in active competition with the Welsh coal. Ever since coal has been used as a steam-making fuel, the English coal yards have had a complete monopoly, and have controlled prices. The Welsh coal strike accentuated these conditions, and 55s. (\$13.38)

has been demanded. Last July, the Pocahontas Coal Company established itself in the River Plata, with offices at Buenos Ayres and yards here; and since then, contracts for a value of \$200,000 have been made, and the work has just begun. Yards have been secured, and coal in all needed quantities will be kept in stock. Three large cargoes have already arrived and have been eagerly taken. Of course, misrepresentation of this, as of all American products, will follow; but use will vindicate it. It is another line entered upon in our commercial expansion that presents the greatest possibilities to a good commodity. The fact that it has been believed here that our war ships had to be supplied with coal from the Welsh mines gives an idea of the lack of knowledge in River Plata ports. American coal has come to stay in these markets.

The Pocahontas Company sent an able and intelligent agent to this field to examine into existing conditions and to report thereupon. He was aided and assisted by the consular service in all ways at their command, with the result that a fine and growing trade is promised. The company adopted the method that all firms in our country seeking trade in any portion of South America should follow.

NEED OF AN AMERICAN WAREHOUSE IN CHINA.

Under date of November 19, Consul-General Goodnow, of Shanghai, writes to a correspondent in New York* as follows:

I sincerely hope that an American-Chinese exposition will be established in Shanghai. In my report† dated April 5, 1898, I said:

I would suggest to other American manufacturers looking to the Chinese trade, as well as to the cycle makers, the advisability of establishing a permanent exposition in Shanghai for American goods. Practically all foreign trade for the middle and north of China goes through Shanghai. An exposition here will reach the trade of the Yangtze Valley and of the north.

* * * * * *

The customs report of 1897 shows that in many important products the imports from the United States have increased at the expense of imports from other nations. We are nearer to the market, freights are less accordingly, and the feeling of the Chinese people is more friendly to Americans than to the people of any other nation. Now is the time to push our trade on this coast. I do not believe that any other method will give better or more permanent results than an exposition of United States products at Shanghai.

The rapidly moving events of the past year have still more confirmed me in my belief in the advisability of such an exposition of

* The original letter has been forwarded.

† See CONSULAR REPORTS No. 214 (July, 1898), p. 384.

our goods. It will surely pay indirectly through an increase of trade to the exhibitors, and I believe it will pay directly in dividends to the stockholders. It should be built in consultation with the United States authorities, and, if possible, an arrangement should be made by which the consulate-general would be in the exposition building. It ought to be located in the American settlement and become American headquarters, and everything done to emphasize its national character.

I need not impress it upon you that Americans must now push more strongly than ever for the trade of China. You have seen the situation, its possibilities and dangers. If the trade goes into other hands now, it is lost to us for many years to come. Most of our manufacturers, having had a sufficient home market (which is the best in the world), have not felt the necessity of reaching out for this our next best market and one yet to be developed. They have been content to do business in a half-hearted way in Asia, and have not taken the trouble to make themselves acquainted with the banking methods, the shipping methods, the various laws in force, the climate, the superstitions, and the details of the needs and customs of the people. In cases which have been brought to my knowledge, manufacturers of cotton goods have refused to make any except the width which is best suited for American markets, although the demand here is for another width. This is a peculiar people, who will buy nothing if they can not get exactly what they want, put up and labeled as their customs and superstitions dictate. The supply must fit the demand.

Our people do not realize their opportunities here. A Chinese viceroy, who is considered antiforeign, stated a few days ago that he was always willing to have Americans come into his viceroyalty to open mines, establish manufactories, and do any kind of business, but he does not want other foreigners. "But," he said, "Americans do not ask for these things, while other foreigners are always asking for them."

An exposition here will increase the variety of our trade, which is now largely in a few great staples only. Many of our important manufactures are unrepresented here. You can not buy an American hat in Shanghai. I know of only one store where American shoes are sold, and it has very few for ladies. Collars, stockings, ties, and like articles of gentlemen's wearing apparel of American make are not found in Shanghai. House furniture is very costly, and none comes from America. American underwear can not be bought here, except the coarsest kind. The American magazines are not for sale and do not come here, unless ordered from home. Practically all the books are of English print and are very expensive. A paper-bound

book which can be bought at home for from 10 to 25 cents costs \$1.50 Mexican, or 72 cents gold. I asked a member of one of the book firms why he did not bring in some of the cheap American books. He answered: "We are a British firm and prefer to handle British goods." On the other hand, an agent of an American manufacturer said to me: "I would as quickly put my goods into the hands of a German, Englishman, or any other foreigner as into the hands of an American. I have no nationality in business." The shortsightedness of this arises from the fact that those very agents to whom he gave his products for sale have a national feeling in their business and always, on even terms, push the products of their own country. English prefer to do business with English, Germans with Germans, and French with French; but Americans in this part of the world are lacking in national business pride, and have suffered for it. No European will sell an American manufacture unless he can make much more money out of it than he could from similar goods from his own country. If American manufacturers expect to handle this market as their situation entitles them to do, they must be represented here by Americans. A long step towards this would be the exposition.

I might multiply instances of American business which is done here by men of other nationalities. A leading American commercial body is to-day represented in China by a German, an able, scientific man; but his friends, his thoughts, and his ambitions are all German. Our steel manufacturers are all represented here by firms of foreign nationality, as is also true of our steamship lines. The bulk of our cotton goods is handled by firms of other nationality. Even some of our American firms are officered by Englishmen; and I was told within the week by the head salesman of an American firm, himself an Englishman, that none but the coarsest prints were made in America—that it was necessary to go to England for fine prints.

There is another side of this matter. The Chinese know only the man with whom they come directly in contact. They do not look to the original makers or sellers of the goods, but to the agent whom they personally know. When they become accustomed to trading with a particular man and have found him reliable, they are easily moved by him to take other brands of goods than those they have been buying, upon his assurance that the new brand is better than the one which they have been using. It will be easily seen from this what power to divert our trade we put into the hands of a foreign agent.

Should this exposition be undertaken, the Chinese merchants who are tributary to Shanghai (and that includes middle and northern China) can see for themselves the modern appliances for which

America has become famous. The Chinese are now buying bicycles and phonographs in large quantities, and none were sold until samples were brought here and exhibited. We can not expect to sell our goods here on description. It seems to me that an exposition at Shanghai is almost necessary to direct connection between the American manufacturer and the Chinese merchant and consumer.

BICYCLES IN HONGKONG.

Probably no class of manufacturers in the United States spends more money in letters and circulars to attract foreign trade than bicycle makers. Every mail brings inquiries from different makers, all asking the same questions and requesting the same attention. The National Board of Trade of Cycle Manufacturers, New York, propounds a series of questions which so thoroughly covers the subject that I am using their letter as a guide in making this report.

To thoroughly understand this market, it is necessary to describe the highway conditions of the colony. Hongkong is built on the side of a mountain 1,800 feet high, and all streets above sea level are terraces broken by flights of steps, making the majority of them unavailable for cycling purposes. Consequently, the available roads are reduced to two, although there are numerous excursions that the daring rider can take throughout the island. The favorite, and in fact only, road for ladies borders the harbor front and is about 8 miles long. This road has a hard, metaled surface and is beautifully kept up. The view and scenery along it is unrivaled, and the breeze that comes sweeping in from the ocean is most refreshing. Every evening from 5 until 7 it is alive with cyclists with the most heterogeneous lot of machines ever seen. Bicycles of all dates run side by side. The other road referred to is called the Aberdeen road, which is also 8 miles long. This road contains some heavy grades which a strong rider can take, but they do not commend themselves to the majority.

This is a free port; consequently, custom-house duties do not have to be considered in the purchase of bicycles or bicycle parts. There are no real importers of bicycles, although there are two small bicycle repair shops which always keep a few on sale. On the other hand, every firm, from the largest to the smallest, handles bicycles for the convenience of customers, who are scattered all over China and the Philippine Islands. Possibly half of those which are in use here were purchased by their owners direct from San Francisco, and probably two-thirds of all the machines in use here are American.

There is no favorite make, and all wheels have equal chances in this market. There has been very little money spent in advertising any particular make, in consequence of which they all go under the generic name of "bicycles," and are not distinguished by names. The Chinese, who are becoming the largest users of bicycles on this coast, are utterly indifferent to name or reputation.

To reiterate what I have repeatedly written bicycle manufacturers, what this market demands is a low-grade, low-priced machine—one that would sell for, say, \$20 gold in America wholesale. If you add, say, \$3.50 freight from New York to Hongkong, the machine could be sold here at a nice profit. The high grades of American machines are at present selling in this market for \$185 Mexican; and, where one could be sold at this price, one hundred at the cheaper figure would find a market. It is not necessary that the machine should even be of a late model. The 1896 make would command just as good a price as the 1899. I consider this a magnificent field for bicycle manufacturers to unload all their old stock. I do not overlook the few enthusiastic riders here who are always in touch with the latest improvements, but am referring to the market as a whole. All bicycles should be fitted with brakes, lamps, and bells, as the streets are crowded with rickshaws and sedan chairs, and darkness comes on almost without warning. Since the occupation of Manila by the Americans, there has been something of a boom in the bicycle trade here, as Hongkong has for years been the feeder for the Philippine Islands, as well as its warehouse. In time, of course, agencies will be opened in Manila for bicycles; but until that time arrives, Hongkong will be the distributing center.

I would not advise bicycle makers to sell indiscriminately to the unknown individual purchaser on credit, as there are no collection agencies here. The same conditions exist with regard to bicycles as to all other shipments, the shipper drawing for his shipment and negotiating his draft through a bank, with complete documents attached.

I do not wish it to be understood that by a "low-grade machine," I mean a shoddy article.

ROUNSEVELLE WILDMAN,
Consul-General.

HONGKONG, *November 9, 1898.*

JAPANESE WOOLEN-CLOTH INDUSTRY.

I transmit herewith a newspaper clipping relating to the woollen industry and the probable increase in the manufacture of woollen goods in Japan, as indicated by the increase in the importation of the raw material.

In this connection, I have to say that the customs return for the first nine months of 1898 show that the importations of the raw material amounted to 2,681,393 pounds, at a declared value of \$574,317 gold, as follows:

From—	Quantity.	Value.
	<i>Pounds.</i>	
Australia.....	1,087,253	\$269,249
China	670,748	79,367
Great Britain.....	414,685	118,951
British India.....	230,341	27,205
Germany.....	226,712	63,571

The remainder came from all other countries.

For the corresponding period of the year 1897, the importations of wool from all countries amounted to 2,404,993 pounds, at a declared valuation of \$313,570 gold.

JOHN F. GOWEY,
Consul-General

YOKOHAMA, *November 17, 1898.*

[From the Japan Herald, November 15, 1898.]

The manufacture of woollen cloth in Japan still remains in an incipient stage, notwithstanding the yearly increasing demand for many varieties of cloth, such as muslin, flannel, blankets, serges, etc. The average importation of manufactured goods amounts to about 1,500,000 yen (\$750,000) annually, but this year as early as September last it had already reached 8,000,000 yen (\$4,000,000). Several factories have, however, been encouraged to adopt a plan for the expansion of their works in consequence of which the importation of raw material, wool, etc., which has not hitherto exceeded 1,000,000 yen (\$500,000) annually, amounted to 1,147,350 yen (\$573,675) at the end of October last, the figures showing an increase of 520,209 yen (\$260,104), or 50 per cent, as compared with the corresponding period of the previous year.

No. 222—7.

WAGES AND COST OF FOOD IN INDIA.

Wages in India are paid in rupees, and this report is based on the exchange value of the rupee at 32 cents, which is a fraction more than the average during the last year. There are many classes of laborers not mentioned in this report, but their wages are relatively the same.

Notwithstanding the very low wages, all laborers in India pay for their own food.

The following is the average rate of wages per month of the classes that will be of the greatest interest to the people of the United States:

Description.	Bengal.	Madras.	Bombay.
Able-bodied agricultural laborer.....	\$2.15	\$1.80	\$2.50
Cotton-mill labor:			
Unskilled.....	2.00	1.90	2.50
Skilled.....	4.50	4.00	5.50
Household servants.....	2.85	2.25	3.00
Common masons, carpenters, and blacksmiths.....	4.00	4.70	7.50
Sycc or horse keeper.....	2.00	2.00	2.50
Railway labor:			
Unskilled.....	2.00	1.60	2.12
Skilled.....	4.20	4.00	4.40
Coolie labor.....	2.00	1.90	2.25
Jute-mill labor:			
Unskilled.....	2.08		
Skilled.....	4.50		

In other parts of India, especially in the Northwest Provinces and Oudh, wages are much lower. The higher wages in the large cities of Calcutta, in the Bengal presidency; Madras, in the Madras presidency; and Bombay, in the Bombay presidency, make the average greater.

The following are the average retail prices the past year of the food grains consumed by the laborers, showing the quantities in pounds sold for a rupee (32 cents) in each of the three presidencies:

Articles.	Bengal.	Madras.	Bombay.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Rice.....	20	20	18
Wheat.....	15	16	14
Barley.....	23		
Margua.....		36	22
Jawar.....	20	30	20
Bajra.....	22	26	17
Maize.....	19		
Arhar.....	22	16	14
Gram.....	18	15	15

The above-named food grains make up the food of the laborers of India. Several of them are usually cooked together, and the quantity consumed by each person is about $1\frac{1}{2}$ pounds per day, costing an average of $2\frac{1}{2}$ to 3 cents. With this food—rarely with meat of any kind—the laborers of India, especially the coolies who do the hardest kind of manual labor, are remarkably healthy, with muscles well developed, and their endurance in carrying heavy loads long distances is something wonderful.

It would hardly seem possible that the wages received would enable the laborers to more than exist; but a majority of them, by their frugal living, not only support their families, but save money.

R. F. PATTERSON,

CALCUTTA, *November 16, 1898.*

Consul-General.

TOBACCO IN THE PHILIPPINES.

The representative of the Dutch and English tobacco growers of Sumatra has arrived in this city en route to Manila. He goes to test the soil there, which he has already analyzed in small quantities and has found suitable for the growth of the Sumatra tobacco leaf. If the soil of northern Luzon is found suitable, there will be no difficulty in obtaining plenty of land at a very moderate figure. The one uncertain element in the whole proposition is labor. Under the existing laws in Manila, Chinese coolies are not admitted except under the same regulations as exist in the United States. Mr. Pinckney (the representative referred to) informs me that native labor has been found both in Sumatra and in Borneo to be absolutely valueless. The Javanese, a thrifty and docile race, can not be trained to give the attention and patience to the growth of the leaf that is absolutely essential. A Chinaman is allotted a certain number of trees to guard and cultivate, and he is paid only for the perfect trees at harvest time. If he goes to sleep on duty, the caterpillars may render his year's work useless in a single night. After the crop is harvested, the thin, delicate leaves have to be handled many times with the greatest care, such as no other race in the world than the Chinese would give. The soil of Luzon is volcanic, and after many trials it has been proven that the Sumatra leaf will grow in no other soil. In Sumatra, the ground will yield one crop every eight years, but my informant believes that the tobacco lands of northern Luzon, which lie at the base of an extensive watershed, will yield a crop a year, with proper manuring. If on investigation this condition of affairs should prove true, it means the introduction of an industry into Luzon that will bring millions of revenue, and at the same time

very materially reduce the price of the Sumatra leaf. Under the Spanish régime, Mr. Pinckney tells me, it was utterly impossible to attempt to establish this industry, although for years it has been believed among the planters of Sumatra that Luzon was the only other part of the world in which they could expect a rival. Of course, nothing will be done further than to test the soils, until the Chinese exclusion laws are removed from the islands. Broadly speaking, there is not an industry in the islands that will not be ruined if Chinese labor is not permitted. The same state of affairs exists in the Straits Settlements, where no dependence whatever is placed upon native labor.

HONGKONG, *November 22, 1898.*

ROUNSEVELLE WILDMAN,
Consul-General.

TOBACCO CULTIVATION IN SZECHUAN.

The tobacco plant is grown all over the province of Szechuan, but more abundantly in the districts of Pe-shan Hsien, which is about 150 li (60 miles) northeast of this city, and Kin-t'ang Hsien, about 100 li (40 miles) east of Chengtu, the provincial capital.

The plant grows to the height of about $2\frac{1}{2}$ to 3 feet from the ground, and the usual time for planting the seed is during the tenth or eleventh moon (November or December). The method before putting the seed into the ground is to sift out a quantity of soil and manure it. When dry, the seed is wrapped with this soil and put into the ground at intervals of a foot and a half. The soil must not be rich, and ground where cereals have not been already planted is generally chosen.

During the year, there are three crops—the first is cut six months after it has been planted, the second twenty days afterwards, and the third crop twenty days after the second crop.

As soon as it is cut, it is hung up to dry for about a fortnight in a sheltered place with a good draft, so that it may dry quickly. When ready for sale, it is done up in bundles weighing 70 to 80 catties (93.3 to 106.6 pounds) apiece.

The Kin-t'ang tobacco leaf receives a little more care. After it is dried, it is put into a press, to enable some of the juice to be pressed out and the leaf made much milder than the other leaves that are sold in the market. It is done up in bundles of 40 to 50 catties (53.3 to 66.6 pounds) each. The seed is sown under shelter. When the leaves are ready, they are picked and exposed to the dew for several nights; they are then dipped in a dye and hung up to dry again before being taken to the markets for sale.

A Chinese merchant has lately started a cigar factory here. Of late years, he has been doing it on a small scale; but this year, he has engaged some twenty apprentices to assist him in doing a larger business. The price per box of 100 cigars is 1,400 cash (97 cents) for the small size and 2,500 cash (\$1.735) for a larger kind. Since the Chinese have not taken to this way of smoking the leaf—their method of smoking is to break off a piece of leaf, roll it into a sort of cheroot, and smoke it in a pipe with a small brass bowl and long bamboo or cane stem—he is not making much progress with his new venture.

The local article can not be said to be equal to the cigars manufactured at Manila; but, with proper curing under the guidance of an expert, I have no doubt the flavor of the Szechuan cigar can be brought up to that of cigars selling in Manila at from \$3 to \$4 Mexican (\$1.37 to \$1.83) a box.

GEO. F. SMITHERS,

CHUNGKING, *October 19, 1898.*

Consul

TOBACCO CULTURE IN THE TROPICS.

The close of the yearly tobacco auctions in Amsterdam gives a very clear idea of the enormous sums which Holland derives from the culture of tobacco in Sumatra. The island yielded 201,800 bales of tobacco, each bale weighing about 200 pounds. The whole when disposed of amounted to \$14,518,000, one-third of which, or about \$4,800,000, represents a net gain. Without doubt, there are years when 70 to 80 per cent dividends are declared in the larger Sumatra tobacco companies. So much for Sumatra alone, without taking into consideration the production of the large tobacco plantations of Holland in Java.

The Germans have good cause to complain when a comparison brings to light the miserable failure of all attempts to grow tobacco with success in their colonies. Only New Guinea still persists in the attempt. The cause for these failures is not to be found in the soil, but in the German initiative and methods. Even a Government plantation has attained a negative result, for want of means and expert knowledge. If proper methods were adopted, good tobacco could be raised in German East and West Africa. Germany, no doubt, will profit greatly by these failures; and, as there is good money in tobacco culture, she will persist until success is achieved.

Holland's success in cultivating tobacco is a subject full of suggestions for the American plantation owner. In Cuba and the Philippines, we will now have the identical climate to deal with which

Holland has in Sumatra and Java, and Germany in her African provinces and New Guinea. Let us profit by the experience of the former country. Holland has achieved her great success in tobacco growing through her methods and long experience. Americans who propose to engage in tobacco culture in our new possessions will find that a study of the methods of Holland's companies will not be time thrown away.

ERNEST L. HARRIS,
Consular Agent.

EIBENSTOCK, *November 28, 1898.*

THE WORLD'S WHEAT SUPPLY.

The chargé d'affaires at London, Mr. Henry White, under date of December 2, 1898, sends copy of a letter appearing in the Times of even date in answer to the statements made by Sir William Crookes in regard to the wheat supply of the world,* and also an editorial on the subject. The editorial, as giving a summary of the contents of the letter, is printed below:

[From the Times, December 2, 1898.]

The two highest authorities on scientific agriculture, Sir John Lawes and Sir Henry Gilbert, have addressed to us a very instructive communication on the wheat supply of the world. It is a criticism, far from hostile in spirit and based on ample knowledge, of the opinions expressed by Sir William Crookes in his address as president of the British Association. It is satisfactory to learn that, in the view of our correspondents, the outlook is not so gloomy as it was described in that address. We are likely to have fluctuations of prices and alternations of good and bad crops. But the upshot of the inquiries of these authorities as to the future of wheat is that there will always be a sufficient supply at remunerative prices. Sir William Crookes's point was that the wheat-producing area of the world is of strictly limited extent; that with the growing calls upon it to minister to an increasing number of mouths it must soon be exhausted; and that we might at no very remote date be in presence of a problem of life and death importance which only chemistry could solve. The letter which we publish to-day mentions facts and figures which qualify the statements made at Bristol as to the output of wheat by the United States; but the weight of the reply lies in the grounds given for believing that there is still all over the world, and in particular in America, wide scope for an increase of produce per acre. The average produce in the United States is only between 12 and 13 bushels, as against about 28 bushels, the average yield of the much poorer soil of these islands. There is the significant fact that the famous experimental wheat field at Rothamsted, an unmanured plot of comparatively poor soil, has yielded for over fifty years in succession more than 13 bushels an acre; in other words, somewhat more than the average of the whole of the wheat-growing area of the United States with their tracts of prairie land. The yield per acre in Russia, which comes next to the United States as an exporter of wheat, is very low; and before Canada, some parts of which are stated to contain the finest undeveloped wheat fields in the world, we may be sure that there are vast possibilities. If the comparatively poor lands of the United Kingdom yield a good return because

*See CONSULAR REPORTS No. 218 (November, 1898), p. 385.

the land is well cultivated and there is a proper system of rotation; if for half a century the Rothamsted field can keep up an average of more than 13 bushels an acre, what may not be in store for consumers as the result of high farming all over the wheat-growing areas of the world. "Most of the export lands of the United States are scarcely more than skimmed over by the plow, scarcely any labor is bestowed on cleaning, weeds largely rob the fertility, the straw and weeds are to a great extent burnt, and manure is often wasted." In face of these facts, the two authors of the communication published to-day think that there is great inherent and unused capability for the production of wheat both in the United States and elsewhere. In truth, as the economists long ago pointed out, and as Sir John Lawes and Sir Henry Gilbert have shown in various papers on the effect of the depression of corn prices, the question of the margin of cultivation of wheat is largely a matter of price. For many years back, with few interruptions—and those only of brief duration—it has not been worth while to bring new land under cultivation here or to farm high in new countries. With us it does not pay to grow wheat where anything else can be grown. But let prices rise continuously; let the scarcity which Sir William Crookes dreads be experienced, and there will be a gradual movement toward new lands and a resort to the methods which Sir John Lawes and other scientific inquirers have proved to be efficacious. "Starvation" and "the grip of actual death" are probably far off, even if we do not devise new modes for the fixation of atmospheric nitrogen.

The truly original part of the letter relates to the climatic conditions necessary for successful cultivation of wheat and the supply of nitrate necessary, if the yield of wheat is to be materially increased. Sir William Crookes pointed out that to increase the average yield of wheat from 12.7 bushels, taken as the present figure, to 20 bushels it would be necessary artificially to increase greatly our supply of nitrate of soda. It would require, he estimated, 22.86 pounds of nitrate to obtain an increase of a bushel. In round figures, an addition of 12,000,000 tons of nitrate would be needed to bring up the yield of wheat to the point which Sir William Crookes regarded as a minimum. Where is that supply to be got if no fresh nitrate beds of good size are likely to be discovered and if the available deposits will not last, as has been predicted, much more than four years? Sir William Crookes had an ingenious idea as to the mode of supplying agriculturists with this prime necessity of an abundant wheat crop. In its free state nitrogen abounds; the problem is to fix it. By water or wind power this problem, it was suggested, must be solved; from the free nitrogen of the atmosphere chemistry must procure nitrate suitable for agriculture. Niagara was pointed to as the possible motor power for such a manufacture. The letter which we publish to-day mentions some remarkable facts, deduced from experiments at Rothamsted, which show that humanity is not in so awkward a corner as we have been asked to believe, and that Nature has ways of getting the necessary nitrate which few chemists have realized. It is found that some deep-rooted leguminous plants send their roots as far down as 108 inches and draw nitrate even from that depth. Confining their observations to the surface stratum, the writers of the letter find that even in the Rothamsted soil the amount of combined nitrogen is very large, and they contend that, "under favorable conditions of agriculture, the rich United States, Canadian, and Russian soils would yield up very much more nitrogen in an available form than they have hitherto done and very much more than the poor Rothamsted soil." In short, even in land not particularly rich, and much more in the best soils of Canada and the United States, there are constituents slowly being rendered available for vegetation and insuring fertility for a very long time to come.

It is not suggested that Sir William Crookes's speculations are visionary, and the importance of artificial manures is made only clearer by the letter. But there

would seem to be no need for alarm; the future can take care of itself if only we be not thriftless and bungling. There is in these days a liking for what may be called cosmic scares; apprehensions large, vague, and depressing; predictions of evil to come to our planet and to much outside it. Our ancestors were prone to believe in the approaching end of the world; their descendants are as eager to believe in the extinction of the conditions which make life possible or tolerable. At the beginning of the century there was anxiety as to the overcrowding of the world by reason of the rapid growth of population; at the close of the century statisticians in most countries are lamenting falling birth rates and the rise of the average age of marriage. Not long ago there were apprehensions as to our stock of coal being exhausted—apprehensions which are now dismissed as too remote to be heeded. Sir William Crookes has gloomy forebodings as to the supply of wheat. Authorities no less eminent tell us to be of good cheer. There always comes some consoling consideration—now derived from free trade, now from free nitrogen, now from improved chemical knowledge, now from better farming. The scare does us no harm, and the calamity does not come.

WHEAT SUPPLY IN CAPE COLONY.

The question of an adequate supply of food products is always present in South Africa. The country will never be able to raise all the cereals it will use, for the tillable land suitable for this purpose is limited, even with irrigation as extreme and as effectual as is anticipated in the irrigation measures now before Parliament. There is never a large supply of wheat on hand, and the future requirements are not anticipated. This country largely depends upon the United States. Statistics show that Cape Colony alone imported wheat in 1897 as follows:

	Pounds.
Argentine Republic.....	21, 580
Chile.....	5, 019, 829
United Kingdom.....	1, 282, 160
United States.....	178, 131, 801
Total.....	184, 455, 370

It must be presumed that part of the wheat from the United Kingdom originally came from the United States.

In this connection, and referring to my report of October 29, 1898,* I desire to add that the exports from the United States to South Africa are far in excess of the published reports, for many products pass through foreign ports and are so credited.

The question of cheap food is being agitated, in the hope that the duty on cereals and meat will be removed. The South African Political Association says:

As but little of the cereals is raised, there should be no duty on wheat, flour, corn, and even meat, as the consumer pays the enhanced price, both for imported

*See Advance Sheets No. 293 (December 8, 1898).

and home-grown wheat. The price of wheat is governed by that of the imported article, plus freight and duty, so that the consumer pays as much duty on home-grown wheat as on foreign wheat. During the last three years, the consumer has paid, in this colony, \$5,343,903.25,* more than would have been the case had wheat and flour been imported free, and this is called a "bread tax." Nor is this all; the wheat duty is designed to benefit the farmer, yet the farmer does not reap one-third of the benefit. The remainder goes to the millers and the Government. The proceeds of the tax were distributed as follows:

Government.....	\$1, 864, 691. 25
Farmers.....	1, 724, 837. 10
Millers.....	1, 756, 374. 90
Total.....	5, 343, 903. 25

The production of wheat in the colony in 1897 was 2,105,784 bushels, and, deducting 480,000 bushels for consumption by the grower and for seed, there are left 1,627,784 bushels. This realized, say, \$3 per bushel in excess of what it would have fetched had there been no duty.

Reckoning 200 pounds of wheat to produce 120 pounds of flour, 1,627,784 bushels, or 108,385,600 pounds, of wheat would yield 65,034,360 pounds of flour. This flour realized, by reason of the duty, \$890,940.97 in excess of its real value. The amount of duty paid to the Government on imported wheat and flour in 1897 was \$2,190,609.45. Of this, the Government received \$876,604.35; farmers, \$527,293; millers, \$686,692.10; total, \$2,190,609.45.

The wheat duty could only be defended as a protective duty were its effect to foster colonial wheat growing and so stop importations from abroad. It has utterly failed to do this. These two facts are indisputable: (1) The colony does not grow enough for its own consumption; (2) the increased duties of 1889 have not increased the production.

J. G. STOWE,
Consul-General.

CAPE TOWN, *October 31, 1898.*

AGRICULTURAL WARRANTS ACT IN FRANCE.

In compliance with a request from a resident of Massachusetts, an instruction, bearing date of September 27, 1898, was sent to the consul-general at Paris, asking for a translation of the new French law on agricultural warrants. Under date of December 2, 1898, Consul-General Gowdy sends the translation. The most important articles† are given below:

LAW FOR AGRICULTURAL WARRANTS.

ARTICLE I. Any farmer may borrow upon the results of his agricultural or industrial products hereafter classified, at the same time retaining possession of the same in his own buildings or in those upon the ground cultivated. The products upon which warrants may be issued are as follows:

Cereals, either in bundles or thrashed; fodder and dried feed; dried pharmaceutical plants.

* Figures, given in the original in pounds, are expressed in United States currency.

† A copy of the law in full has been sent to the inquirer.

Dried vegetables; dried fruits and seeds or roots; textile materials, animal or vegetable.

Oil seeds and seeds for sowing.

Wines, ciders, spirits of alcohol of different natures; dried exteriors of grain.

Cut wood, resin, and tan bark.

Cheeses, honey, and wax.

Vegetable oils.

Sea salt.

The agricultural warrant remains in the hands of the bearer of the warrant until the sums advanced are reimbursed. The farmer or producer is responsible for the merchandise which remains in his custody and care without any indemnity whatsoever.

ART. II. The farmer or cultivator, in cases where he is not the proprietor or receiver of the income from his work, shall, before making any loan, notify the proprietor of the property leased of the nature, the value, and the quantity of produce or merchandise which is to form the guaranty for the loan; also the amount of the loan to be demanded.

Such notice should be given to the proprietor, the person entitled to the income, or his legal representative designated, through the offices of the clerk of the justice of the peace of the canton in which the residence of the borrower is located. The notification letter should be deposited with the clerk, who should visé, register, and send the same under form of registered letter, at the same time acknowledging receipt of the same. The proprietor or person entitled to the income, or his legal representative, in case payments become due and not paid, should within a delay of twelve full days, counting from the date of the registered letter, make opposition to the loan on the said products by a letter addressed to the clerk (*greffier*) of the justice of the peace, which letter should be registered.

ART. III. The clerk of the justice of the peace will write on the two parts of a register with stub, specially drawn up for this purpose, and in accordance with the declaration of the borrower, the nature, the quantity, and value of the products which are to serve as guaranteeing his loan, also indicating the amount of the loan requested. In case the borrower shall not be the proprietor or the person entitled to the income of the ground worked, the clerk of the justice of the peace should, beside the conditions above mentioned, indicate the date the notice was sent to the proprietor (or usufructier), the one entitled to the income, as also the absence of any opposition on his part after a delay of twelve full days from the date of the posting of the registered letter.

The sheet detached from this register becomes the warrant which will permit the cultivator to obtain his loan.

ART. IV. The warrant should indicate if the product warranted is insured or not, and, in case of its being insured, the name and address of those insuring.

ART. V. The clerks (*greffiers*) are obliged to deliver to any borrower who requests it, with the authorization of the lender, a copy of the writings in reference to the loan made or a certificate establishing that no writing exists.

ART. VI. The borrower who shall have reimbursed his warrant shall have the same confirmed at the office of the clerk of the justice of the peace. The payment shall be written in the register on the stub referred to in Article III, and a receipt shall be given to him canceling his request.

ART. VII. The borrower may, even before a payment is due, pay such amount on account of the warrant. In case the lender refuses his offer, the borrower may, in order to free himself, deposit the sum offered, observing the formalities as prescribed by article 1259 of the civil code. Upon sight of the regular and sufficient receipt of deposit, the justice of the peace shall issue an order indicating that the sum shall be placed to his (the borrower's) credit against the debit consigned.

In case of a prepayment of an agricultural warrant, the interest on the loan ceases for such sum ten days from the date of such payment.

ART. VIII. The public-credit establishments may receive these warrants as commercial paper, dispensing in such cases with one of the signatures exacted by the other statutes.

ART. IX. The discounter in the first or second instance of a warrant is obliged to give immediate notice to the clerk of the justice of the peace by registered letter, with acknowledgment of the notification of the discounter's letter.

ART. X. In default of payment when due, and after proper notice transmitted by registered letter to the borrower, in which a request for acknowledgment of the same should be made, the holder of the warrant, without further notice and without any judicial formality, but in such forms of publication as provided for by articles 617 and following of the code of procedure, may, eight days after the first notice, proceed through a ministerial officer to the public sale at auction of the merchandise deposited as security.

ART. XI. The creditor is directly paid the amount of his advance from the selling price, by privilege and in preference of all other creditors, without any deduction beyond those of the regular direct contribution (tax of the locality) and the expenses of the sale, and also without other formalities than the order of the justice of the peace.

ART. XII. The holder of the warrant loses his right to proceed against the indorsers of the same, should he not cause the sale to be made within the month following the original notice to the borrower. The holder has no recourse as regards the borrower or his indorsers, except after having exercised his rights upon the products or merchandise placed as security. In case the amount realized is insufficient, a delay of one month is accorded to him from the date that the sale of the merchandise took place, in order to have recourse against the indorsers.

ART. XIII. It having been proved that he (the borrower) has willingly put aside, dissipated, or deteriorated the security to the prejudice of the creditor, he shall become liable as having committed an act qualified as "abuse of confidence" and punished in accordance with articles 406 and 408 of the penal code, without in any way interfering at the same time with the application of article 463 of the same code.

ART. XIV. In case for the execution of this law there shall be necessity for a referee, the matter shall be brought before the justice of the peace.

FLAX RETTING IN FRANCE.

Many attempts have been made in past years to substitute for the antiquated practice of retting flax in the river, a more practical process.

A few years ago, Messrs. Doumer & R. de Swarte invented a process of steeping in closed vessels* that has been thoroughly tested by a commission appointed at Lille by the Minister of Agriculture. The report of Mr. E. Dickson, president of this commission, states that the value of the process has been tested by direct experiments. It consists in immersing flax in closed vessels, with the addition of amylobacter microbes. The temperature, gauged so as to

* See CONSULAR REPORTS No. 206 (November, 1897), p. 363.

prolong the vitality of the microbe to the greatest possible extent, is evenly maintained. Under these favorable conditions, the retting is reduced to the shortest possible time for each species of flax. As soon as the flax is steeped, the vessels are drained. The drying process is accomplished without disturbing the flax, by means of hot air introduced by a ventilator. This operation requires but little time, and the drying is uniform.

After having ascertained that the new process accomplishes retting in the most thorough manner, the subcommission proceeded to study the weaving and bleaching of flax retted and dried by this process, and published as its opinion that this process, if adopted in the different flax-producing countries, would give a far superior retting to that practiced on the farms. Flax retted as at present has less value than if it had been subjected to a proper process, and consequently occasions loss to the farmer.

The first tests were made with a vessel containing only 40 kilograms (88 pounds) of raw flax. Since then, Messrs. Doumer & de Swarte have opened a factory at Steenbecque, department of the north.

In a recent supplementary report, Mr. Dickson states that the retting and drying is as well accomplished in a vessel containing 2,000 kilograms (4,092 pounds) as in the small one; also, that the system is so arranged that any quantity desired can be worked with the same satisfactory results.

The importance of this process is commented upon in various French papers. Its adoption, in their opinion, will save the farmer the cost of transport of his flax to the Lys, as he can have the retting done as well, if not better, in a factory in his own vicinity, with the additional advantage that the cost will be less.

W. P. ATWELL,
Commercial Agent.

ROUBAIX, *November 17, 1898.*

EUROPEAN SUGAR-CROP ESTIMATES.

Consul Diederich writes from Magdeburg, December 1, 1898:

It had come to be a matter of common belief that the sugar beet would grow and develop under the most adverse circumstances. No drought, however persevering; no rains, however incessant, could make much difference with the final outcome at harvest time—so it was supposed by many. But this last season has opened the eyes of everyone interested in this matter. The planting was late in the spring, because of the backwardness of the season. Weeks of cold, steady rain followed, and then an equally long period of hot and very dry weather. Yet so little did most of the manufacturers of

sugar in Germany figure on a possible crop failure, that they had sold fully one-half of last year's product at very low prices before they realized that there would be a shortage of material in the campaign of 1898-99. True, the juice in the roots now being sliced shows a higher percentage of sugar than last year, but the beets are smaller in size and are pulpy. A number of factories have already (at the end of November) found it difficult to get material, and some have suspended operations altogether.

It is generally supposed that the deficit will amount to at least 350,000 tons; but it is yet too early to accurately determine this question. However, all the old stocks of sugar in this and other European countries having run low, the market has been stronger for some time, and the prices have had an upward tendency.

All the commercial and industrial authorities have issued their estimates of the world's sugar-beet crop. The figures are undergoing changes from week to week, yet the totals do not greatly vary. In the month of October, the following estimates were made:

Country.	Licht (Germany).	Gieseke (Belgium).	Economiste (France).	Centralblatt (Germany).
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Germany	1,847,018	1,670,000	1,650,000	1,675,000
Austria	831,667	795,000	820,000	775,000
France	821,235	795,000	695,000	775,000
Russia	735,000	730,000	735,000	700,000
Belgium	225,000	180,000	185,000	187,500
Holland	125,658	145,000	135,000	140,000
Other countries	190,000	160,000	155,000	165,000
Europe	4,775,578	4,385,000	4,375,000	4,427,500

Consul-General DuBois, of St. Gall, under date of November 25, 1898, submits estimates of a similar nature, and adds:

The output of the colonies, Licht puts down at 2,680,000 tons, in which Cuba figures with only 300,000 tons, against 2,537,571 tons in the previous season.

BEET CULTIVATION IN ITALY.

The enormous import duty placed on sugar has greatly restricted its general use in this country; so much so that while the consumption per capita amounts in England to 40 kilograms (88 pounds), in the United States to 29 kilograms (54 pounds), and in France to 13 kilograms (29 pounds), in Italy it is only 2.16 kilograms (4.7 pounds). At the same time, the demand for this desirable article of alimentation is constantly increasing, and, were the price to fall, sugar would find a ready consumption among all classes. Under

existing circumstances, the retail price is 1.60 lire per kilogram, or about 14 cents a pound.

At this period in the economic history of Italy, there is felt more keenly than ever before the necessity of exploiting new fields of industry with a view to bettering the fortunes of the agricultural proprietors, who have been so disastrously affected by the declining prices of their products and by the proportionate increase in the cost of living.

The cultivation of the sugar beet might possibly prove to be the much-needed panacea, offering, as it would, on the one hand, a remunerative return for the labor of the farmer, and, on the other, a larger field for the employment of the increasing population of the Kingdom.

France produces annually 700,000,000 kilograms (1,543,220,000 pounds) of sugar, while in 1829 the production was only 4,000,000 kilograms (8,818,400 pounds); Germany produces 1,845,000,000 kilograms (4,067,487,000 pounds); Austria, 900,000,000 kilograms (1,984,140,000 pounds); and Russia, 700,000,000 kilograms (1,543,220,000 pounds) a year. Although in Italy few refineries are in existence, only 2,000,000 kilograms (4,409,200 pounds) of beet sugar being produced per annum, there have recently been manifested signs of revival of this important industry. New refineries have been opened at Savigliano and Legnano, and it is to be hoped that the vigorous efforts made in Rovigo toward the establishment of the industry may be crowned with success.

In the meantime, the subject is actively discussed by the press. But, as in all matters of industrial revival in Italy, there is an entire lack of initiative and business energy on the part of the capitalists of the country.

Experiments in the cultivation of the sugar beet have been rather extensively carried on in this district, and the results are considered by local agricultural experts to be highly satisfactory, clearly indicating that the province of Venice is capable of producing a beet of the first rank. I append tabulated results of these experiments, which have kindly been furnished me, thinking they may be of interest to the sugar-beet industry in the United States. The experiments whose results are indicated in Tables I and II were carried on by Sig. Camille Nordini at Noventa di Piave, the seed used being furnished by the Royal Agricultural School of Conegliano. The field planted was a plot of 432 square meters (4,650 square feet), containing a rich soil of medium consistency. The ground was worked with a Sack plow to the depth of 30 centimeters (11.8 inches), and generously fertilized with hypophosphates. The seed was planted during the second half of the month of April. The distance

between seeds was 40 centimeters (15.7 inches), and they were set in lines 47 centimeters (18.5 inches) apart. The crop was gathered on the 14th of November. The results derived from the different seeds experimented with are shown in the following table:

TABLE I.

Variety.	Area cultivated.		Crop.		Product per acre.
			Beets.	Weight.	
	<i>Sq. meters.</i>	<i>Sq. feet.</i>	<i>Number.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Vilmarin.....	115.2	1.24	240	387	13,561.2
Imperial.....	105.6	1.137	254	530	20,252.7
Wanzleben.....	105.6	1.137	295	709	27,122.5
White Silesia.....	105.6	1.137	238	583	22,304.7

The varieties Vilmarin and Imperial were slightly damaged by insects and mice. The results, however, are quite satisfactory and would have been superior had the fertilization of the soil been completed with sulphate of potassium.

Table II gives the results of the analysis of the same beets made by the Royal Agricultural Society of Conegliano, with a view to determining their saccharine qualities.

TABLE II.

Variety.	Yield per hectare.	Average weight of root.	Juice.	Saccharine grade of juice.	Sugar in juice.	Sugar in pulp.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Imperial.....	50,044	1.6	87.7	13.1	10.2	8.9
Wanzleben.....	67,020	1.4	86.4	14.6	11.9	10.3
White Silesia.....	55,115	1.06	79.3	15.1	11.2	8.9
Vilmarin.....	33,520	1.9	90.2	14.7	11.1	10

Independent experiments in the same direction were made at Mogliano by Baron Bianchi, a gentleman much interested in the agricultural development of Italy. The results of his experiments are given below:

TABLE III.

Variety.	Roots per hectare.*	Leaves per hectare.	Average weight of root.	Juice.	Saccharine grade of juice.	Sugar in juice.	Sugar in pulp.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Imperial.....	100,530	5,644	3.49	94.4	8.3	5.4	5.1
Wanzleben.....	98,766	6,658	2.64	91.1	12.5	7.9	7.2
White Silesia..	118,167	10,692	4.07	86.6	9.9	6.9	6
Vilmarin.....	131,174	6,459	3.49	90.7	11.5	7.5	6.8

* 2.471 acres.

H. ABERT JOHNSON,

VENICE, November 26, 1898.

Consul.

WHEAT AND CORN CROPS OF ITALY.

The following extracts are from a report by Consul Jarvis, of Milan, dated December 3, 1898, the full text of which has been sent the Department of Agriculture:

The season of 1898 has been very favorable for the Italian wheat crop, the production being more than 50 per cent greater than in 1897 and more than 12 per cent greater than for the preceding ten years. The harvest amounts to 47,000,000 hectoliters (133,386,000 bushels). Rome, Foggia, and Catania have been the greatest producing provinces. The imports of wheat for the season of 1897-98, owing to the poor crop of 1897, exceeded those of the previous year by 564,194 tons. The following table shows the amount of importation, in tons, and the countries whence imported:

Country.	1896-97.	1897-98.	Increase in 1897-98.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Roumania.....	11,640	31,969	20,329
Russia.....	371,260	787,757	416,497
Turkey.....	3,543	10,104	6,561
Asia.....	1	44,334	44,333
Africa.....	218	663	445
South America.....	46	46,970	46,924
Other countries.....	112	29,217	29,105
Total.....	386,820	951,014	564,194

Of these 951,014 tons of wheat imported into Italy in 1897-98, 447,377 tons were free, 281,782 tons paid a duty of 50 lire (\$9.65), and 221,855 tons a duty of 75 lire (\$14.47).

The corn crop was also good, amounting to 26,850,000 hectoliters (76,200,300 bushels), an increase of 15½ per cent over that of 1897 and of about 4 per cent over the average of the past ten years.

CROPS OF SWEDEN.

I submit the following report upon the crops of Sweden for the present year (1898), which I have compiled from the latest official statistics just issued by the Royal Central Statistical Bureau.

The crop of 1898 is classed as "nearly good." For the last twenty-five years, the crops of only four years have been classed equally good, and the crop of but one year—1892—better.

The quantity of wheat, barley, and mixed grain, and more especially of oats and fodder, harvested is very large, and the quality is generally satisfactory. On the other hand, the potato crop is much below the average in quantity, and its quality is very bad.

The "mixed grain" of Sweden is made up chiefly as follows: Oats, about 45 per cent; barley, about 30 per cent; and pod crops, about 25 per cent.

The following table gives the quantity of each of the principal crops of Sweden for 1898, in bushels. For convenience of comparison, the average crop of the preceding ten years is placed in an adjoining column.

Crops.	1898.	Average, 1888-1897.	Crops.	1898.	Average, 1888-1897.
	<i>Bushels.</i>	<i>Bushels.</i>		<i>Bushels.</i>	<i>Bushels.</i>
Winter wheat.....	4,257,000	3,944,536	Pease.....	1,170,107	1,500,167
Spring wheat.....	285,219	263,934	Beans	241,230	207,458
Winter rye.....	21,139,694	21,800,097	Vetches	671,187	721,136
Spring rye.....	331,195	271,597	Buckwheat.....	5,392	6,244
Barley.....	14,806,130	14,305,790	Total.....	123,891,187	114,266,111
Oats.....	70,423,267	62,579,035	Potatoes.....	38,526,134	54,458,098
Mixed grain.....	10,560,766	8,666,117			

The total weight of all the grain and pod crops of Sweden for the year 1898 is 2,452,000,000 kilograms (2,702,439 tons); the average weight of the same crops for the ten preceding years (1888-1897) was 2,276,000,000 kilograms (2,508,834 tons); showing that the crop of this year exceeds the average crop in weight by no less than 176,000,000 kilograms (194,004 tons).

The actual market values of the grain and pod crops of Sweden for 1898, reckoned in United States currency, are estimated as follows:

Wheat.....	\$5, 145, 600
Rye.....	19, 269, 200
Barley.....	10, 398, 400
Oats.....	29, 533, 600
Mixed grain.....	6, 083, 600
Pod crops.....	2, 465, 600
Total.....	72, 896, 000

During late years, Sweden has imported annually an average amount of about 276,000,000 kilograms (304,234 tons) of grain, chiefly wheat, rye, maize, and flour; and exported about 164,000,000 kilograms (180,777 tons), chiefly oats; showing that Sweden consumes latterly about 112,000,000 kilograms (123,457 tons) of grain more than she produces.

The crop of 1898 is, however, as we have seen, 176,000,000 kilograms (194,004 tons) above the average, which would seem to show that this year Sweden has raised grain amply sufficient for her own consumption, and that the balance of the grain trade, until the harvesting of the crops of 1899, will at all events not be against Sweden.

W. W. THOMAS, Jr.,

Minister.

STOCKHOLM, December 10, 1898.

WHEAT CROP AND ELECTRIC RAILROADS IN RUSSIA.

The Commercial Industrial Gazette publishes information just received by the revenue department as to the condition of the autumn crops, as follows:

The first frosts, which occurred during September, were followed on October 10 by a thaw, which continued until the end of that month. The autumn crops in the western and southwestern zones were fairly strong, especially in Poland. The number of districts having unsatisfactory or medium growths has decreased to 91 (15 per cent of the total number of districts), instead of 120, or 19 per cent. The districts where wheat sown this autumn is satisfactory and in good condition include the whole of the extensive Volga and Kama basins; also the greater part of the black-soil streaks of the Baltic provinces, Poland, southwestern provinces, the Crimea, and Caucasus. The growth in the North Divina and provinces of Pskoff, Rezan, Tamboff, Vilma, Witebsk Grodnoff, and Rostoff districts are only fair, while bad results are to be found in a few separate districts, such as Kharkof and Poltova.

The Ministry of the Interior is at present considering the question of constructing a network of electric railways in Riga. The town corporation has taken this matter in hand. The Ministry has expressed its willingness to support the town by allowing a loan for the above purpose on profitable conditions. The general cost of constructing the electric roads in Riga has been determined at 1,600,000 rubles, or \$800,000.

THOMAS SMITH,
Consul.

Moscow, *December 13, 1898.*

A NEW FOOD FOR STOCK.

In both Denmark and Sweden, for the past few years, experiments have been made with blood as an ingredient for animal feed. Similar experiments have been made in Germany, with apparent success. A patent (No. 84299) has been issued for the manufacture of an animal-food mixture called "Kraftfutter" (strength feed) or "Blutmellassefutter" (blood molasses feed), of which the principal ingredients are fresh blood (collected at the city slaughterhouses), sugar refuse, and "grain cheat," by which I mean screenings or blowings from wheat, barley, rye, oats, etc. Turf mull, or turf flour, has been tested as a substitute for "cheat," but not with success.

This feed is prepared in three different mixtures—for horses, for cattle and swine, and for poultry. The retail price is 6 marks (\$1.41) per 100 pounds. The preparation is not intended to be fed raw, but as a mixture with other regular feed—for instance, when the amount of oats given per day is 15 pounds, with the use of "Kraftfutter" the quantity of oats is reduced to half, or $7\frac{1}{2}$ pounds, to which is added 5 pounds of "Kraftfutter."

I have been informed that at present the Government is experimenting with this feed on artillery horses, it being claimed that the albumen in blood, coupled with sugar and the other ingredients, makes an exceptionally strengthening food, in addition to being inexpensive.

Factories for the production of this mixture are now in operation at Berlin, Stettin, Kiel, and Königsberg.

Under separate cover I forward sample.*

JOHN E. KEHL,

STETTIN, *December 3, 1898.*

Consul.

FIBER INDUSTRY IN ANTIGUA.

The distress from which Antigua has suffered of late years may be mainly attributed to the fact that sugar is the only staple of the island. While pineapples, oranges, limes, cocoanuts, and other fruits for which a ready market could be found in the United States are indigenous to the soil and might be produced in large quantities, the lack of native energy has militated against any effort looking toward diversifying the products of the island.

So also, the island abounds in fibrous plants, many of which might for scores of years past have been turned into money but for this same lack of enterprise. It is gratifying to be able to report, however, that, even at this late day, the creation of a fiber industry is beginning to demand the consideration of some of the largest planters and managers of estates. A short time since, the Hon. C. Arthur Shand, member of the governor's council and manager of the estate owned by Sir Gerald Codrington, Bart., took from the plantation two samples of fiber of the variety known as "Sisalana." These samples were somewhat unsatisfactorily cleaned by a hand process, the prevailing drought rendering it necessary to use salt water, which affects not only the color but the fabric of the fiber. Of the fiber so prepared, one portion was sent to an expert in New York and the other to a firm of cotton brokers in London.

The American expert reported that the value of the fiber in that

* Transmitted with copy of report to the Department of Agriculture.

market, according to sample, would be 6 to 6½ cents per pound, it being somewhat inferior in quality to the "standard," which is valued at 6¾ cents. The London firm reported that the preparation of the fiber was very well done, its strength fair to good, its length moderate, and that it was a good article, which should sell well, its value at the time of writing (August, 1898) being appraised at £25 to £26 (\$121 to \$126) per ton. This would appear to give a difference in favor of the American market of about 2 cents per pound; but, as the United States duties are higher, this discrepancy might disappear in actual results.

Data gathered from the Bahamas, Yucatan, Turks Island, and other fiber-producing localities show that the cost of production with modern approved processes of manufacture is about 2 cents per pound; so that the margin of profit is considerable, provided there is a liberal yield of good plants. The facts herein enumerated, together with the opinions of agricultural chemists and others of experience, have been placed by Mr. Shand before the Agricultural and Commercial Society of the Leeward Islands, with the result that this body, after a careful consideration, has adopted a resolution recognizing the advantages the colony would gain by a development of the fiber industry, and urging that the home Government take steps toward procuring the introduction of a locomotive fiber machine as part of the imperial scheme for developing the "minor industries of the West Indies." It is estimated that the cost of a first-class locomotive machine, capable of producing 1,000 to 1,500 pounds of fiber per diem, would be not more than £600 (or \$3,000, in round figures).

If the already matured plans of the British Government for the relief of the West Indies will not permit of consideration being given at this time to this project, an effort may be made to interest American capitalists in the enterprise.

HENRY M. HUNT,

ANTIGUA, *December 8, 1898.*

Consul.

FOREIGN INDUSTRIAL DESIGNS AT PARIS EXPOSITION.*

Consul Frankenthal, of Berne, writes on December 12, 1898:

The high court of appeals at Paris, France, gave an important decision in the case of a Swiss firm, which, in its application is far-reaching to our manufacturers who intend to present to the world in 1900 their best brain efforts and products.

This manufacturer perceived that certain designs of his, although registered in France, were extensively copied by a French firm. He

* See also page 525, *ante*.

brought suit, and a judgment of the high court of appeals to which the case was carried was entered against him. In announcing its decision the court says:

We assume and acknowledge that imitations of registered designs are proven. This case is based on the law promulgated by imperial decree of 1861, by which foreigners are allowed to register designs at Paris if their country has a reciprocal treaty with France; but this law has fallen into disuse, with a great many others at the epoch of free-trade agreements. Under international agreement of 1883, foreigners are put on the same footing as the French, and by virtue of the text of the law of 1806, amended by decree of 1825, a manufacturer is obliged to deposit his designs to be protected with the competent authorities of the district in which his factory is located.

Therefore, manufacturers who have no factory in France are at the mercy of the French imitators, since under the ruling of the highest court imitation of designs, etc., is lawfully allowed. Manufacturers registering their designs in Paris and paying a handsome sum for supposed protection is in this case a fallacy, although the authorities accept thousands of francs yearly for these purposes, based on the imperial decree of 1861.

A report covering similar information has been received from Consul-General DuBois, of St. Gall, dated December 10, 1898.

PERFUME INDUSTRY IN SOUTHERN FRANCE.

In a late number of the *Revue de Statistique*, there is an interesting collection of facts concerning the perfume industry in the department of the Maritime Alps in southern France.

The quantity of blossoms required annually for the manufacture of perfumes, oils, etc., is: Of roses, 2,000,000 kilograms (4,409,200 pounds); of orange blossoms, 2,500,000 kilograms (5,511,500 pounds); of jasmine, 200,000 kilograms (440,920 pounds); of cassia blossoms, 150,000 kilograms (330,690 pounds), and the same weight of tuberose; and 200,000 kilograms (440,920 pounds) of violets.

The average prices paid for a kilogram (2.2046 pounds) of blossoms are 4 francs (77.2 cents) for violet and cassia, 5 francs (96.5 cents) for tuberose, 2½ francs (48.2 cents) for jasmine, 65 centimes (12.5 cents) for roses, and 70 centimes (13.5 cents) for orange blossoms.

One violet plant will give a weight of 20 grams, or one twenty-fifth of a pound, of blossoms, and an orange tree 10 kilograms (22.046 pounds). A flower picker could gather in four hours 20 kilograms (44.092 pounds) of roses, 3 kilograms (6.66 pounds) of jasmine, or 6 kilograms (13.2 pounds) of tuberose, and in a whole day 10 kilograms (22.046 pounds) of violets or orange blossoms.

In order to prepare 1 kilogram (2.2046 pounds) of essence, 1,000 kilograms (2,204.6 pounds) of orange blossoms, which means approximately 1,200,000 separate flowers, are required; and for a kilogram of ottar of roses, about 16,000 kilograms (35,273.6 pounds), or 5,000,000 roses.

In a single year there are produced in that district alone 500,000 kilograms (1,102,300 pounds) of pomade or oils, of which the value exceeds 15,000,000 francs (\$2,895,000).

E. THEOPHILUS LIEFELD,

FREIBURG, *December 2, 1898.*

Consul.

NEW BRIDGE AT MANNHEIM.

Under date of November 19, 1898, Consul Hoffman writes from Mannheim:

At a meeting held on the 17th instant, the city council of Mannheim passed a resolution appointing a commission to take into consideration and report upon the erection of another bridge across the Necker River, at Mannheim, the constantly increasing traffic demanding better facilities between this city and the large northern suburbs.

The only bridge now crossing the Necker is a three-span iron structure about 187 meters (613.52 feet) long from center to center of extreme piers; width of driveway, 10 meters (32.7 feet); walks on either side having a width of 3.5 meters (11.48 feet) each; thus giving an extreme width of 17 meters (55.77 feet).

The entire weight of the iron used in the construction of the bridge is 1,679,000 kilograms (3,701,423 pounds), while the cost was as follows:

For—	Cost.	
	<i>Marks.</i>	
Foundation and sandstone.....	200,000	\$69,020
Superstructure.....	528,000	125,664
Driveway.....	39,800	9,472
Architectural ornamentation.....	35,000	8,330
Removal of temporary structure.....	39,600	9,424
Temporary bridge used during construction.....	67,000	15,946
Approaches.....	48,000	11,424
Miscellaneous and incidentals.....	202,600	48,076
Total.....	1,250,000	297,356

In view of the reasonable freight rates given by the Rhine River transportation companies between Rotterdam and Mannheim, some of the American bridge-construction companies may desire to compete.

TELEPHONES OF THE WORLD.

I give below statistics in regard to the telephones in use in the different countries of the world, which have been carefully prepared by the statistical department of this Government:

Country.	Instruments in use.	Distance covered.	
	Number.	Kilometers.	Miles.
Sweden (1897).....	56,500	120,000	74,568
Norway (1897).....	20,678	53,880	33,481
Denmark (1895).....	10,500	15,000	9,321
Finland (1895).....	7,351	21,000	13,049
Great Britain and Ireland (1894).....	69,645	134,215	83,401
Holland.....	8,000	8,000	4,971
Belgium (1895).....	9,227	26,127	16,235
Germany (1896).....	151,101	236,712	147,093
Austria (1896).....	21,616	74,630	46,375
Hungary (1896).....	10,203	28,870	17,940
Switzerland (1897).....	28,846	76,593	47,594
France (1894).....	27,736	101,754	63,230
Italy (1896).....	11,991	21,000	13,049
Spain.....	11,038	22,084	14,282
Russia.....	18,495	65,000	40,391
Roumania.....	750	227	141
Bulgaria (1893).....	300	600	372
Japan (1897).....	3,232	8,468	5,262
British India.....	1,601	3,695	2,296
French India.....	89	556	345
Philippines.....	452	954	592
Algiers.....	335	361	224
Tunis.....	200	452	281
Senegal.....	50	87	54
The Cape and Natal.....	600	1,770	1,100
United States (1896).....	772,627	1,296,655	805,711
Cuba.....	1,812	1,900	1,181
Canada (1898).....	33,500	70,840	44,020
Mexico (1896).....	9,000	19,000	11,807
Paraguay (1891).....	500	1,006	625
Uruguay (1896).....	3,269	13,063	8,117
Australia.....	823	3,846	2,390
Total.....	1,288,163	2,429,254	1,509,499

EDWARD D. WINSLOW,
Consul-General.

STOCKHOLM, December 19, 1898.

ARTIFICIAL SILK IN GERMANY.

Artificial silk consists of prepared cotton or wood fiber, and has been known to the trade under this denomination for the last nine years. It possesses an extremely silky luster, and can therefore be employed as an imitation of silk.

Count Chardonnet, a Frenchman, the inventor of this material, converted the cellulose (cotton or purified wood fiber), by a process described in German letters patent of the year 1884, through nitro-sulphuric acid, into nitrocellulose. He then freed the same from the acid and dissolved it in a mixture of alcohol and ether. The solution thus obtained—collodium—is pumped through glass pipes which are provided with extremely fine holes, and these collodium threads are passed through warm water (acidulated), which causes the alcohol and ether to evaporate, and only the fine nitrocellulose threads remain. A number of these fine threads are brought together, slightly twisted, and spooled.

This extremely lustrous, but also easily inflammatory—even explosive—tissue was put on the market at the time of the Paris exhibition in 1889.

Owing to its great liability to catch fire, it did not come into practical use, but after this difficulty was overcome by removing the nitro groups (a process called denitrating), the harmless fiber was employed in the textile industry. By a similar method, artificial silk was produced by a certain chemist of Augsburg, Germany—Dr. Lehner—who is at present residing in Switzerland.

Lastly, however, a method has been invented by Dr. Fremery and Civil Engineer Urban in which the use of the injurious nitro-cellulose is omitted. These two inventors dissolve cotton waste in copper oxide of ammonia, and pump this solution through fine tubes. The delicate threads are passed through diluted acid, which separates the copper and ammonia, the result being an extremely fine, lustrous fiber, which is employed as an imitation silk. This process, patented in Germany (D. R. P. 98642) and in all other civilized states, is said to have the following great advantages over those of Chardonnet and Lehner:

(1) That the manufacture as well as the product is in no way dangerous.

(2) That the production is much simpler.

(3) As a consequence, that imitation silk can be manufactured by this process at considerably less cost.

MAX BOUCHSEIN,

BARMEN, *November 22, 1898.*

Consul.

GOLD PRODUCTION IN THE TRANSVAAL.

Consul Macrum sends from Pretoria copy of a statement by the chamber of mines in regard to the gold production in the South African Republic. Mr. Macrum's report will appear in full in Commercial Relations, 1897-98; the following extracts are printed now, as of current interest:

The Rand has at last reached and surpassed the marvelous output of 400,000 ounces of gold as the production for a single month of twenty-eight working-days. Every twenty-four hours, then, witness the recovery of 14,250 ounces of gold, worth rather over £50,000 (\$243,325). The Rand total comprises only the output of mines along a stretch of some 30 miles of country. With this statement for the month of October, the gold winnings of the whole Republic for the ten months of 1898 amount to 3,700,908 ounces. At this rate, the total for the whole of 1898 would be over four and a half millions. It is not likely, however, that this amount will be reached, as the mines are running short of water.

The value of the October 423,000 ounces is £1,500,000 (\$7,299,750), which may be compared with £11,653,725 (\$56,162,743), the value for all in 1897, and £12,208,411 (\$59,412,232), the value of the gold production of the United States in the same year. Although the combined mines of Colorado, California, Dakota, Montana, Nevada, and Alaska put out more gold last year than did the South African Republic, it is not likely that the Transvaal will take second place this year. Deep levels continue on the upgrade, as their production in October was 106,426 ounces—the first time that the hundred thousand has been exceeded. The average price of the September production was £3 16s. (\$18.42) per ounce.

The yearly aggregates since 1888 have been—

Year.	Quantity.	Year.	Quantity.
	<i>Ounces.</i>		<i>Ounces.</i>
1888	208,122	1894	2,024,162
1889	369,577	1895	2,277,685
1890	494,819	1896	2,279,827
1891	729,238	1897	3,034,678
1892	1,210,869	1898 (10 months).....	3,700,908
1893	1,478,477		

It is noteworthy that not only is the number of stamps at work being increased, but the rate of increase is growing. When the continuation of the main reef to the east is exploited, as it soon will be, these figures will seem insignificant except to the reminiscent.

WIRELESS TELEGRAPHY.

The following is a translation of an article by M. Ducretet, explaining his theory, which has just furnished interesting practical results:

The starting point was the discovery by Henri Hertz, in 1889, of electric waves analogous to waves of light. A machine invented by him enabled one to perceive the diffusion of electric vibration at a short distance.

Professor Popoff, a Russian savant, was on the point of applying this discovery to telegraphy in 1895, when he learned that M. Branly, a Frenchman, had already invented the tube seen in my machine and which is the essential point, as this puts in motion the electric currents, or, to use the technical term, the inducting currents.

M. Branly has not received the proper share of praise for his important invention. In 1890, he had already observed the action of electrical radiation on metal filings, free or agglomerated, placed in an insulator between two conductors forming a circuit made by a battery and a galvanometer. The filings, primitively insulated or of very high electric resistance, become conductors when they are struck by an electric wave. This conductivity is destroyed by a blow, but reasserts itself when the filings are struck by a new wave.

M. Branly has given the name of radio-conductors to his tubes made of filings. This name suggests that their conductivity springs from the influence of electric radiation, produced by any source whatever. The sensitiveness of this transmitter is extremely great.

Professor Popoff first used his own machine to register electric waves produced by atmospheric disturbances; he then demonstrated that it could be practically employed in the navy for long-distance signals. England immediately commenced experiments with a machine based on the same principles and with which, it is said, messages have been sent between Bournemouth and the Isle of Wight.

Experiments have been made in Paris and quite recently at Brest, where Mr. Tissot has successfully communicated with a point 1,800 meters (5,905 feet) distant. I have covered a distance of 4 kilometers (2.48 miles), and the transmission was as clear, even through a fog, as between the Pantheon and my laboratory, rue Claude Bernard. I have reason to believe that still greater distances will be compassed. The chief difficulty will be to find two points at sufficient distance and at the same time high enough not to be hidden from one another. The success that has crowned our efforts is due to the improvements I have made in the receiving machine and particularly in the Branly tube.

It can not be concluded from our experiments that Hertz telegraphy will take the place of ordinary electric telegraphy, but experiments already prove the value of this system for the exchange of signals between ships and the shore, for light-houses and exploring service, and for communication in our colonies—African and Asiatic. In town, posts could be readily established by using windows or towers on high buildings very far apart. The only objection would be that all machines favorably situated would receive the telegrams from one transmitter. This would render telegrams public property, unless a secret alphabet were adopted.

The receiving machine may be utilized for other purposes than communicating the current to a telegraphic machine; a row of incandescent lamps can be lighted, for example, or the fuse of a mine touched off. It is merely a question of sufficient force.

The experiments spoken of by M. Ducretet are now being carried on at his Paris laboratory. On the top of the building passers-by may see a mast 20 meters (65 feet) high. A wire passes along the top and is connected below with an electric conductor, a Ruhmkorff coil, and an accumulating battery made after a special plan. The machine is set in motion by pressing on a handle. By manipulating this, a telegram can be sent as well as by an operator seated before his machine. It would seem that the message would stop when it reached the end of the wire. This is not the case, for it is transmitted to a receiving machine 4 kilometers (2.48 miles) distant. To secure this transmission, there must be no such obstacle as an iron wall or shaft between the two points. A simple wall does not interfere for a space of several hundred meters.

As soon as the transmitter is put in motion, the receiving machine—the ordinary Morse machine—begins to work automatically; the dispatch arrives as well as if a wire connected the two points. A bell rings to indicate the transmission of a message, but the paper rolls out automatically to receive the words printed by the Morse alphabet, and when the message is completed, the paper ceases to roll.

The message is received through a garret window, from which hangs a wire. This wire communicates with the Morse machine through a box containing special machinery. As soon as the telegram starts this begins to tick, and an experienced telegrapher might spell out the telegram before it appears on the paper.

For the use of specialists and for laboratory experiments, a small transmitter has been constructed which has no mast and no wire running above. In the course of experiments, this little box has even been disconnected from the wire hanging from the window and the transmitter started. The same ticking began, and the vibrations were plainly felt by taking it in the hand.

The box can be opened without danger and everything withdrawn. There will be found in it dry piles, small wire coils, and various apparatus known to electricians. Profane eyes see a little hammer that strikes on a tube when the current that transmits the telegram passes. The stroke of the hammer against the tube produces the ticking sound; and it is this tube, the essential part of the construction, that is the invention of M. Branly, a native of France. It is claimed in France that to this tube is due wireless telegraphy, both in this and other countries.

W. P. ATWELL,
Commercial Agent.

ROUBAIX, *November 23, 1898.*

BRITISH VIEW OF UNITED STATES CONSULS.

A London journal called *Commerce* publishes weekly an interview with some well-known and public-spirited business man. This week, the commercial conversation is with Mr. Robert P. Yates, formerly the chairman of the Birmingham Chamber of Commerce, a justice of the peace (a position here of great honor), and a member of the Warwickshire county council. Mr. Yates has lately turned his attention to the activity in American consular work and to the methods by which the Philadelphia Commercial Museums work in the interests of American exporters, and the interview with him in this week's *Commerce*, which I inclose, is mainly on these two points.

MARSHAL HALSTEAD,
Consul.

BIRMINGHAM, *November 29, 1898.*

[From *Commerce*, London, November 9, 1898.]

The "capital of the Midlands" is always producing clear-headed business men. Indeed, this output is most important in developing and controlling to a successful issue all branches of Birmingham manufacture. I went to Birmingham the other day, and renewed my acquaintance with men and things in the city of iron and brass, bedsteads and bicycles, and municipal munificence. Among other people of mark, I had a chat with Mr. Robert P. Yates, formerly a chairman of the Birmingham Chamber of Commerce. He has always taken a keen interest in commercial affairs looked at from the national as well as the individual point of view, and was in possession of many facts which may not be known to the general public. He spoke of the great displacement of British manufactured goods by the nearly prohibitive duties on our exports to the United States, France, Russia, and other countries. During the past six years, the United States have increased their exports thirty-four millions, Holland has increased her total volume of trade by fifty-eight millions, and Germany forty-two millions, while the British net increase has only been one million. We then discussed the United States methods of doing business.

"So you think the American consuls make themselves more useful to their country than the British do to theirs?"

"Yes; there can be no doubt of it. The United States consul, to begin with, has fewer traditions. That is a great advantage. He has also, in my experience, a far keener eye to industrial and commercial affairs and a better capacity for details, technical and otherwise. In, I believe, sixty towns and cities of the British isles there is an American consulate. About half of these are in charge of American citizens, the others being English; but these latter are mostly at the unimportant places. The thirty Americans have taken to the duties of ambassadors of commerce with a zeal which can not, I think, be too closely followed by British consuls in foreign countries. Of course, it is only of late years that manufacturers of the United States have generally laid themselves out for a foreign trade. But, like new beginners at most things, they have put a lot of enthusiasm into the work and have spared no trouble. This enthusiasm is shared by the consuls, and they take a

pleasure in acquiring information likely to be useful, even though it may entail a good deal of trouble and expenditure of a lot of time. Yet the American consuls are not given to the writing of long-winded reports, or to explaining at length the principles upon which American merchants should conduct their export business."

"But," I inquired, "in what way do the United States consuls get better information than the British?"

"I should say they take a great deal more trouble over getting information and go to work in a different fashion. The American consul, as a rule, is the sort of man to cultivate the acquaintance of business men in his district, and, of course, we know that the citizens of the Stars and Stripes are champions at the gentle art of questioning, and their questions are usually very much to the point. If a man in a large way of business is willing to 'open out' at all, the American consul will stick to him until he has got all the essential facts likely to be useful to the traders supplying the particular description of goods used. Then again, when he gets anything he thinks of importance, he does not wait for a month to include the information in a comparatively lengthy report. He writes out the statement concerning the matter promptly, perhaps even the same night—as was the case in one instance that came under my notice—he catches the next mail, it is published in Washington in two or three weeks, and it is circulated all over the United States with no longer interval from the time the information was acquired than would be taken by many of our consuls in preparing the report. I quite admit that the English reports may be more strictly correct in some respects, which is only to be expected as the result of much greater deliberation, but in these days of telephones and telegraphs, and steam and scramble, promptitude is almost everything, and an ideal consul should be almost as smart as a journalist.

"Then there is this about it. In order to supply the sort of information to merchants which is furnished by American consuls, it is necessary to adopt more or less aggressive tactics. I admit that; and of course up to now the British consul has never considered himself in the light of a commercial traveler, but the American consul takes himself that way with the utmost good will. Now, whether it would be wise for the British Foreign Office to encourage our consuls to throw aside their traditions in this respect is, perhaps, a mooted point; but I certainly think that where the other and imperative duties of a consul prevent him from giving a large amount of his time to purely commercial matters, an assistant consul should be appointed, who could make that department his special care. And there is room for a great deal more useful activity. Probably no British consul would adopt American methods without feeling that he was losing dignity. But, depend upon it, the time for the old-fashioned notions prevalent in British consulates has gone by. Even supposing that the consuls go on working upon the same lines as heretofore, their reports might certainly be sent in more promptly, and they should be published within a few days of their arrival in London. The custom of elaborately editing and revising them, involving often a delay of several weeks, is altogether a mistake and could be easily amended. At Washington the CONSULAR REPORTS are, I believe, issued daily, and the advantage of this prompt publication is highly appreciated."

"Then you do not agree with the idea that British merchants themselves can best ascertain through their own representatives and correspondents the information they require?"

"Most certainly not. Those firms who have already got a big connection abroad, and who, being old and established, have had ample experience of trade possibilities in the countries they do business with, may likely enough obtain all the information they want, independently of any consul. It is just this sort of firms—who as a rule are wealthy and independent—who are disposed to turn up

their noses at new business under any conditions out of the ordinary course. It is the new firms, or at least the firms seeking new markets, who require the information which might be, but seldom is, given by consular reports."

"Do you think the commercial museums in America assist the manufacturers there in meeting the world's competition?"

"Most decidedly so. In conversation I have lately had with American gentlemen engaged in the sale of their goods, I was much interested in their Government's method of giving commercial information. They have established commercial museums,* for which their consuls from time to time purchase goods of European make which sell freely in the countries in which they are officially appointed. For \$50 annual subscription, a member may send to the commercial museum any foreign correspondence he may receive and at once obtain a translation. He writes his reply in English and obtains a translation into the language he requires, thus saving the expense of a foreign correspondent. We have the Imperial Institute, but what practical use is it to commercial men? If run on American lines, it would be difficult to estimate the benefit that would result to British commerce."

"May I ask your opinion on the importance of commercial education in connection with the development of trade?" I knew Mr. Yates was great on this question, and, as I expected, he replied earnestly:

"Certainly. The national question of elementary and secondary education, combined with technical instruction, is the burning topic of the present moment. If systematically taken up, it should greatly assist us in retaining our commercial supremacy. When attending the conference on commercial education which was convened by the London Chamber of Commerce in the Guildhall on July 8, a report of the meeting was submitted to the Warwick County Council by the organizing secretary, Mr. St. John, as follows:

"(1) That all education of every kind is indissolubly linked together, and that a superstructure of art, of science, of commerce, or of technical education can not be raised unless there is a sound and solid basis on which to build.

"(2) That many of the principal commercial houses are being crowded with foreign clerks—chiefly German.

"(3) That the German clerk has been trained in habits of hard work, of plain living, and of steady perseverance, and it is these qualities which make him such a formidable rival.

"(4) That our system of money, weights, and measures was cumbersome and unnecessary, and took up far too large a time in a boy's early years of study.

"(5) That the conditions of secondary education are deplorable, resulting from the fact that the bulk of our secondary schools are in want of funds; and that the Government grants are chiefly for subjects not directly connected with commercial education."

*NOTE BY BUREAU OF FOREIGN COMMERCE.—This evidently refers to the Philadelphia Commercial Museums, which were not established by the United States Government, but by private enterprise, aided by State and municipal appropriations.

STATUS OF UNITED STATES COMMERCIAL AGENTS.

The Bureau of Foreign Commerce has received several inquiries from foreign sources as to the status and duties of commercial agents in the consular service of the United States. It is thought that these inquiries have been prompted by the activity of the consular officers in obtaining commercial information, and also by the marked development in the exports of manufactured goods from the United States.

In view of the fact that these inquiries indicate the impression that the commercial agents have special functions in the collection of information for American manufacturers and exporters, it is thought to be desirable to explain that they have no other status than that of ordinary consular officers, and are not more particularly engaged in the work of securing commercial information than are the other members of the consular corps.

The following synopsis of the Consular Regulations on the subject will show the slight differences, mainly of a technical character, between the commercial agents and the consuls:

Consuls-general and consuls are appointed by the President, by and with the advice and consent of the Senate. Commercial agents are appointed directly by the Secretary of State acting for the President. (Consular Regulations, par. 31.)

Commercial agents are by the laws of the United States full, principal, and permanent consular officers (R. S., sec. 1674). No distinction is made by statute between them and a consul. They differ from consuls only in rank or grade. The order of official precedence is (1) consuls-general, (2) consuls, (3) commercial agents, (4) vice-consular officers, (5) deputy consular officers, etc. Consuls and commercial agents rank with captains in the Navy or colonels in the Army.

Commercial agents derive their functions from the same statutes as consuls-general and consuls, and are entitled to enjoy all the powers, immunities, and privileges that under public law or otherwise are accorded to the consular office. The title of the office as representing a distinct grade in the consular service is peculiar to the service of the United States. It is usual to ask formal recognition and an exequatur for a commercial agent from the government to which he is accredited, as in the case of other principal officers.

Commercial agents in the consular service of the United States are to be distinguished from certain officers described in international law by the same title, who are not usually regarded by other

powers as entitled to the full rank and privileges of a consular officer. The exigencies of the public service of the Government have from time to time made necessary the appointment of commercial agents of the character and with the restricted functions and privileges of such officers as known to international law; and this right is at all times reserved. In those instances, however, in which officers of this title and character have been appointed, the appointments have usually been made to countries the governments of which had not been recognized by the United States or into which it was desired to send a confidential agent whose recognition need not be asked from the local government. Commercial agents appointed previous to August 1, 1856, were of this limited character. An act of Congress of that date established their rank as consular officers and superadded to their former powers the functions that appertain to the office of consul.

STATUS OF AMERICAN CITIZENS IN ENGLAND.

Americans establishing agencies and living here have at times asked me what rights, as aliens, they have under English law; and in response to my request, Mr. F. M. Burton, my vice-consul, who is an English solicitor, has prepared the inclosed statement on the status of American citizens in England.

MARSHAL HALSTEAD,
Consul.

BIRMINGHAM, *December 30, 1898.*

STATUS OF AMERICAN CITIZENS IN ENGLAND.

An American citizen, whether naturalized or not, may now reside in England and enjoy almost equal privileges with a British-born subject, the policy of England being to encourage foreigners to settle here for the purposes of trade, as well as to afford them a safe asylum in times of trouble.

All persons who are not subjects of the Crown are called aliens, and the laws affecting them were formerly very harsh. They could hold lands neither by purchase nor by descent; they could not take a seat in Parliament or hold office under the State; and by an act passed in the reign of James I, it was laid down that "all such as are to be naturalized or restored in blood shall first receive the sacrament of the Lord's Supper and the oath of allegiance and the oath of supremacy." They were also subject to taxation from which British subjects were exempt. This, however, has all been done away with, and the disabilities of an alien are now very few. If he

becomes naturalized, they are almost entirely removed. Should war break out between England and the state to which an alien belongs, he would be permitted to continue his residence in England so long as he conducted himself peaceably.

The laws affecting aliens were settled under the naturalization act, 1870 (33 and 34 Victoria, c. 14), and subsequent statutes, which enacted that—

Real and personal property of every description may be taken and acquired, held and disposed of by an alien in the same manner in all respects as by a natural-born British subject; provided, that this shall not confer any right on an alien to hold real property situate out of the United Kingdom, nor shall it qualify an alien for any office, or any municipal, parliamentary, or other franchise.

An American, therefore, may still remain a citizen of the United States and live and carry on business in England. He has the right to acquire property, and to sue and be sued; and he is liable to the bankruptcy laws in the same manner as a British subject.

An alien becoming naturalized under the above-mentioned act has all political and other rights, powers, and privileges, and is subject to all obligations of a natural-born British subject in the United Kingdom, with the qualification that he shall not, when within the limits of a foreign state of which he was a subject before being naturalized, be deemed a British subject, unless he has ceased to be a subject of that state in pursuance of the laws thereof or in pursuance of a treaty to that effect.

Naturalization is usually obtained by certificate of the Home Secretary, which is granted on application, subject to the following conditions, viz:

Residence in the United Kingdom or service under the Crown for five years in all during the preceding eight years.

A memorial to the Home Secretary with required particulars.

Statutory declaration verifying the memorial.

Declaration by four British subjects vouching for loyalty and verifying memorial.

An oath of allegiance.

Under the United States regulations (convention with Great Britain, May 13, 1870), naturalized subjects of either country are recognized as such, and citizens of either country renewing their residence in those countries may be readmitted to the character and privileges of citizenship on such terms as the respective Governments may think fit.

BRITISH TRADE IN SOUTH AMERICA.

The Department has received from Mr. Henry White, chargé d'affaires ad interim at London, copies of blue books containing the first three reports by Mr. Worthington, special commissioner of the Board of Trade to investigate the conditions of British trade in certain South American countries. Mr. Worthington's first two reports are devoted to Chile; the third, to the Argentine Republic. The following extracts have been taken from the reports as of interest to the United States trade:

CHILE.

Before proceeding to relate the results of my investigations regarding the competition of foreign-made articles with those of British manufacture, it will not be out of place to consider what the total amount of merchandise cleared from bond from the principal manufacturing countries, for consumption at all Chilean ports, has been for a series of years. The Chilean custom-house statistics in this matter are fairly complete. The valuations being almost all on a fixed basis, which has not been altered (until now) for some twenty years, the figures afford a good comparative index, though not, perhaps, a correct statement of market values; whilst the names of the countries whence the goods are imported, being given generally according to the flag of the importing vessel, afford, as a matter of fact, a fairly correct indication of the origin of the goods, at least as regards British merchandise. Belgian and other continental goods are, however, largely mixed with German in the statistics.

The figures for the years 1887 to 1896 (1897 figures are not yet complete) for the four chief countries are as follows:

Year.	Great Britain.		Germany.		United States.		France.	
	<i>Pesos.*</i>	<i>Dollars.</i>	<i>Pesos.*</i>	<i>Dollars.</i>	<i>Pesos.*</i>	<i>Dollars.</i>	<i>Pesos.*</i>	<i>Dollars.</i>
1887	20,400,000	7,446,000	11,600,000	4,234,000	3,200,000	1,168,000	5,500,000	2,007,500
1888	26,300,000	9,599,500	14,000,000	5,110,000	3,100,000	1,131,500	6,100,000	2,226,500
1889	27,900,000	10,183,500	14,800,000	5,402,000	3,800,000	1,387,000	6,500,000	2,372,500
1890	29,500,000	10,767,500	15,700,000	5,730,500	5,200,000	1,898,000	6,800,000	2,482,000
1891	27,800,000	10,147,000	12,100,000	4,416,500	4,100,000	1,496,500	4,900,000	1,788,500
1892	34,100,000	12,446,500	21,000,000	7,665,000	4,600,000	1,679,000	6,700,000	2,443,500
1893	30,800,000	11,242,000	17,000,000	6,205,000	4,500,000	1,642,500	4,100,000	1,496,500
1894	25,500,000	9,307,500	12,300,000	4,489,500	3,700,000	1,350,500	2,300,000	839,500
1895	32,000,000	11,680,000	17,300,000	6,314,500	4,500,000	1,642,500	1,600,000	584,000
1896	30,200,000	11,023,000	20,100,000	7,336,500	6,800,000	2,482,000	2,800,000	1,022,000

* The reductions from Chilean currency have been made on the basis of 1 peso equaling 36.5 cents

VALPARAISO.

Alkali.—The import of caustic soda (for native soap boilers) from England has increased largely, whilst that from Germany has fallen off.

Apparel and slops.—In made clothing England has increased largely, whilst Germany and France have fallen off heavily.

Arms and ammunition.—The Government import their own. Messrs. Krupp have an agent here, and most of the Government supplies in 1896 came from Germany. The Chilean commander in chief is a German. Outside Government work the trade is small. English arms apparently have less sale than formerly, whilst the figures for continental and United States makes show large increases.

Bags, empty.—There is practically no foreign competition with gunnies from India, either direct, via England, or via Hamburg, whether for wheat, nitrate, or ores; but flour sacks are almost all made in the country from United States cotton osnaburgs, which consequently have a large sale.

Beer and ale.—This trade is now practically in the hands of the native breweries, of which there are four fine large ones which send their wares up and down the coast, beside numberless small ones. The imports are comparatively trifling, and those from Germany have come down to a tenth of what they were five years ago.

Railway carriages and wagons.—The railways in southern Chile almost all belong to the State, and the trade in rolling stock is chiefly by tender. Of late years, the United States has been most successful. Much, however, is done locally, as at present tenders for rolling stock from local makers are preferred, if not more than 15 per cent higher than those from importers or than maximum prices fixed for the foreign article.

Coal.—Consumption is estimated at about 1,200,000 tons per annum, of which about half is native; and of the other half, about two-thirds is New South Wales and the remainder West Hartley and other good English coal. The native coal is soft and does not compete for mining and other industries involving expensive carriage, and thus it does not appear to have gained any proportionate advantage over the imported article. It is worthy of note that much of the English coal comes to the nitrate ports in French bottoms, large vessels with several holds, whose owners buy the coal on ship's account and sell each hold to separate buyers with contract for delivery at the rate of 100 tons per day from each, so that great dispatch is secured. As these vessels get a mileage bounty from the French Government, they sell their cargoes profitably at a rate which would leave the English shipper a loss after paying ordinary freight of 2s. 6d. (60.8 cents) a ton or more.

COTTON MANUFACTURES.

These are all imported.

White shirtings, drills, etc.—English goods hold the market, but there is also a comparatively insignificant importation from the United States and apparently also from the Continent.

Domestics, gray drills, etc.—The same remarks apply to these as to white shirtings, except that United States competition is becoming felt.

In cotton prints and common qualities of trouserings—1.625d. to 3d. (3.2 to 6 cents) per yard—upon which the demand chiefly runs, the English goods practically hold the market. The trade in better qualities of printed trouserings is comparatively small.

In printed flannelettes also the great bulk of the business is in English goods. A certain amount (perhaps 20 per cent of the whole) of continental goods do, however, find a market.

In wove colored goods the great bulk of the trade in oxfords, tickings, etc., is English, but in trouserings German goods prevail.

WOOLEN AND WORSTED MANUFACTURES.

Plain cloths.—In plain common woollen and worsted (and mixed) cloths for men's clothing, English goods now have the largest share of the trade; but the import of

German goods is large nevertheless. In better quality goods and worsted suitings, the demand is comparatively limited. Tailors import enough for two suits of a pattern. This trade is done through travelers for London and Paris houses; mostly Frenchmen, I am informed.

Dress goods.—In woolen (and mixed) dress goods for women, continental goods are rather more used than English goods, and their import has increased in a larger proportion.

Flannels are not separated in the statistics from cotton flannelettes, so that it is impossible to judge of the position held by English pure flannel; but continental goods seem to come in very cheap. The old-fashioned "baizes" are going out gradually.

Blankets are made to some extent in the country; otherwise the consumption seems to be about evenly divided between England and the Continent. The old-fashioned "poncho" is slowly becoming less in vogue.

Carpets and druggets.—The trade is mainly in English tapestry carpets of qualities about 11d. to 1s. 2d. (22.2 to 28.3 cents) per yard. There is some continental competition, but no American. Thick woolen saddle felt comes from Germany.

HARDWARE AND CUTLERY.

Hollow ware.—In cast-iron goods, the tinned ware is practically obsolete. In the enameled articles—pots, fry pans, stew pans, etc.—the British article is now almost entirely superseded by the German make, owing solely to the much lower cost of the latter, as, in quality, the German is very inferior to British. A comparison of the cost of the various sizes of German and English makes has been given me, the prices being free on board:

Number.	Capacity.	Price of German pot.		Price of English pot.	
		<i>Pence.</i>	<i>Cents.</i>	<i>Pence.</i>	<i>Cents.</i>
3.....	2 pints.....	10.55	21.3	14.04	28.4
4.....	3 pints.....	11.12	22.5	17.28	35
5.....	4 pints.....	12.01	24.3	19.44	39.4
6.....	Three-fourths of a gallon.....	14.62	39.6	23.22	47
7.....	1 gallon.....	16.22	32.8	27.54	55.8
8.....	1½ gallons.....	18.5	37.4	32.94	66.7
9.....	1½ gallons.....	20.64	41.9	39.8	80.6
10.....	1½ gallons.....	22.20	44.9	41.58	84.2

These prices are for cast-iron round pots, enameled inside, with bail handles and bright tin covers. Wrought-iron enameled hollow ware has generally taken the place of the cast-iron enameled ware; it is also taking the place of the commoner class of earthenware. The German wrought-iron enameled ware has far outstripped the British, and now the United States manufacture is also competing.

Locks of commoner sorts are mostly from the Continent. A German iron chest lock, 2-inch depth, sells at \$1.75 (63.8 cents) per dozen; German iron till lock, 1-inch depth, at \$1.25 (45.6 cents) per dozen; 1¼-inch depth, at \$1.50 (54.7 cents) per dozen; 1½-inch depth, at \$1.75 (63.8 cents) per dozen; 2-inch depth, at \$2 (73 cents) per dozen; 2½-inch depth, at \$2.25 (82 cents) per dozen; 3-inch depth, at \$2.50 (91 cents) per dozen.

Cutlery.—The better qualities generally come from England and the poorer from the Continent. Taking the total figures, England is gaining in knives and forks. but losing in metal spoons.

IMPLEMENTS AND TOOLS OF INDUSTRY.

Plows.—A small American plow, weighing 18 kilograms (39.6 pounds), and sold at \$8 (\$2.85), has cut out the old "Concepcion" and "Valparaiso" hoes for vineyard work. Supplies of spare points are brought out for sale at 55 cents (20 cents) each point.

Shovels and spades come chiefly from England, but United States competition is keenly felt.

Adzes are less wanted than formerly, owing to the timber in the south being now wrought chiefly by circular saws, which come mostly from the United States.

Chisels and screw-drivers of third quality are now coming from England to hold the market at low prices, but where woodwork bulks largely in any tool, the United States seem to have an advantage. Joiners' tools generally are less wanted in proportion than formerly, owing to doors and windows for houses being made by machinery.

Brush ware.—German brush ware is fast cutting out the English, American, and French in common and medium qualities, which have, of course, by far the larger sale. A small German scrubbing brush, used in the country for washing cloths, sells at \$2 (\$1.09) per dozen; a German horse brush, at \$7.50 (\$2.73) per dozen; a German whisk dandy, at \$6.50 (\$2.37) per dozen; German shoe brush, at \$1.50 (54 cents) per dozen; German sash tools, at \$1.40 (51 cents) per dozen; German paint brushes (French pattern), at \$6.50 (\$2.37) per dozen.

LEATHER.

The import of tanned hides from England has increased, whilst that from the Continent has fallen off. There are extensive tanneries in the country which tan all the native hides. Native hides are exported largely, almost exclusively to Germany, a large portion of the hides being of a coarse quality, destined chiefly, I am informed, for the Russian market.

The manufacture of boots and shoes is an extensive native industry. The work is largely done by farming out, and a good deal is done in the jails. The import of boots and shoes has increased largely, and in a much larger proportion from England than from Germany; but now, the increase in duty to more than double what it was on patent leather and to more than three times on ordinary leather, is expected to very greatly curtail this trade.

Leather belting is now largely made in this country; but, in spite of this fact and the import duty now imposed (5 per cent), there is still a very considerable quantity of English make consumed, although the quality has had to be reduced in order to get the goods in at a price possible to obtain.

Saddlery and harness is also largely made in the country; in fact, beyond a comparatively small quantity of English saddles, hardly anything is imported. The native manufacture is now further protected by increased duties. Much of that manufacture is of a very common kind, but it serves the purpose and is cheap. The advent of the railway from Buenos Ayres to Mendoza killed this and other Chilean trade with the east side of the cordillera.

LINEN AND JUTE MANUFACTURES.

The trade in these is very small; the largest lines seem to be colored linen drills and sailcloth, of both of which England supplies the major portion.

MACHINERY.

Locomotives have been referred to under "railway carriages and wagons." English steam engines for agricultural purposes hold the market. Some good gas engines come from Germany; they have not a preference over the English, but tend to keep the prices of the latter down.

The market for mining machinery is, like the industry itself, in a very depressed condition. German mining machinery is reported better liked than English, and has also the advantage of there being more English mine managers than there used to be; but English winding engines hold their own.

Mining fuse, which was formerly exclusively of English manufacture, is now largely imported from Germany, being very much cheaper, whilst the quality is satisfactory.

In agricultural machinery, the United States seems to have gained the ascendancy. The thrashing machines, for example, are reported lighter and quicker than English; and, although they do not separate so well, and will not last as long, they sell far more readily on account of their cheapness.

IRON.

In pig, bar, angle, bolt, and rod, England still has the great bulk of the total trade, which is not divided in the statistics. The statistics show, however, that the continental imports have made a very great advance, while the English have not. Cheaper freights from Antwerp and Hamburg tell in favor of the former. The Belgian iron is poorer than Staffordshire, but it does well enough and will go where the c. i. f. cost is in its favor. United States pig has been coming to a small extent of late.

Railroad.—Steel rails are not and never can be made in the country to compete with those from elsewhere. They are admitted free.

Wire.—The trade seems to be falling away in English makes and increasing in continental. United States wire is also coming. The cheapest cost c. i. f. is the prime consideration, and freights helped the continental makers, as will be apparent from the following rates ruling about the end of January last, as I am assured by importers, on this article, viz: Steamer from Antwerp, 20 francs and 5 per cent, or 16s. 10d. per 1,000 kilograms, say 18s. 6d. (\$4.50) per ton; steamer from Liverpool, 22s. 6d. and 5 per cent, or 23s. 7½d. (\$5.74) per ton; sailer from Hamburg, 8s. (\$1.94) per ton, no primage; sailer from Liverpool, 15s. and 10 per cent, or 16s. 6d. (\$4.01) per ton. United States barbed wire is liked.

England holds the market in wire rope for mining purposes; but wove wire, formerly exclusively of British make, is now obtained from Germany at lower prices and better finish. I append a few figures of present cost of German iron wove wire, japanned, f. o. b. Hamburg, packed in crates and put up in rolls of 50 yards by 2 feet wide, viz:

Size of mesh.	Price per square meter.	
	Marks.	Cents.
1 to 12.....	1.11	26.4
14 to 16.....	1.12	26.6
18.....	1.23	29.2
20.....	1.31	31.1
24.....	1.54	36.6

Plus half a mark (11.9 cents) per crate for packing.

In galvanized wire netting, England is paramount.

Hoops, sheets, and boiler plates.—Continental hoop iron seems to have increased largely in favor, so that it is nearly on a par with English in respect of quantity dispatched. Galvanized corrugated sheets come almost exclusively from England. Galvanized iron is reported to be taking the place of sheet zinc for structural purposes, such as guttering, down pipes, cornices, etc. Boiler plates come chiefly

from England; but a fair quantity is now coming from Belgium and is likely to increase, owing to lower freight, etc., and some have also lately come in from the United States.

Tinned plates.—The trade is a small one, but almost all in the English article, although a little has come from the United States. There are several fruit-canning enterprises in the country, some of which make their own cans; but there are also two small can factories. The machinery used, I am informed, is adequate and up to date. The lobster (really crayfish) fishery at the Island of Juan Fernandez cans its product; the management complains of being unable as yet to find anything which really prevents alkali, in which the fish is very rich, from attacking the cans. The native market takes all this canned fish.

Cast or wrought and all other iron and steel manufactures.—I have already referred to several well-appointed local foundries and machine shops, which supply a certain portion of the demand; but the protection is insufficient in a country of small population, and where other imports are highly protected, ever to admit of imports ceasing to be relied on, generally speaking, for supplying the great bulk of it.

Iron pipes come chiefly from England. The trade in cast-iron pipes for mains is mostly a matter of contract; but wrought-iron pipes up to $2\frac{1}{2}$ inches for gas and galvanized-iron pipes up to same size for water are largely dealt in.

Anchors and chains are practically all English.

Nails, screws, and rivets.—In cut-iron nails, the United States manufactures seem to have most acceptance; the nails are considered better proportioned, less likely to turn over or split the wood in driving. The nails are imported in neat little kegs, which form much more handy and attractive packages than the big iron drums in which English nails come.

Wrought iron "deck" nails come largely from Germany; the English are considered too thin for ship-repair work, for which deck nails are chiefly wanted here. Common English deck nails are used for building purposes. Belgian bright horseshoe nails, which sell at about \$25.50 (\$9.30) per keg of 100 pounds, are fast pushing all others out of the market, being cheap and showy.

Tacks of American make prevail, and German G. C. nails are suitable. A packet containing 500 of the latter sells at 60 cents (21.7 cents).

Of wire nails, the consumption is large, the supplies coming exclusively from Germany. I append a note of present cost of German wire nails f. o. b. Hamburg, packed in cases of 45 kilograms (99.2 pounds) net and in packets of $2\frac{1}{4}$ kilograms (4.96 pounds).

Number.	Size.	Price per cwt.	
	<i>Inches.</i>	<i>s.</i>	<i>d.</i>
10.....	0½	15	6
11.....	0¾	14	6
12.....	1	12	9
13.....	1¼	11	3
14.....	1½	10	6
15.....	1¾	9	0
17.....	2	7	9
18.....	2½	6	9
19.....	3	6	0
21.....	4	5	6
22.....	5	5	6
23.....	6	5	6

Last sailer freight, 8s. (\$1.94) per ton in full; last steamer freight, 20 francs (\$3.86), plus 5 per cent primage, per ton.

Screws.—England practically holds the market in screws, but American coach

screws, square headed, 2 inches by three-eighths, which sell at \$4 (\$1.42) a gross, are pretty certain to oust the English article, being cheaper.

Iron bedsteads of English make hold the market, but the duty is now so heavy—viz, something like 10s. 6d. (\$2.55) on a bedstead costing 12. 6d. (\$3.04)—that imports are likely to fall away; moreover, the demand is reported to be now running upon a native-made bedstead, instead of upon the imported one.

Spring wire mattresses, generally of English make, are being, to a large extent, superseded by the country-made article.

Iron buckets come principally from England.

Cast-iron boilers, which were formerly imported from Great Britain in considerable quantities, are no longer used, the boiling of fat being now done by steam in the municipal slaughterhouse.

Wrought-iron hinges.—England was until lately the supplier of these goods, but the American-made article has entirely superseded the English one. American iron hinges (2 inches, which sell at 65 cents per dozen pairs) have very superior make and finish (for a cheap article), and are put up in an especially neat manner.

COPPER.

Unwrought copper is one of the exports of Chile.

Wrought-copper ware, sheets or tubes.—England practically holds the trade in these.

BRASS OF ALL SORTS.

Kettles.—A German brass kettle for spirit lamp sells at \$4.25 (\$1.55). These flat brass kettles are to a great extent replacing the English kettle, whilst the spirit lamps (for making the kettles boil) replace the old brasier for burning charcoal. These spirit lamps or stoves are entirely of continental manufacture, but it is hard to see why such articles should not be made in England. The sale is large.

Hinges.—Brass hinges are almost entirely of German origin, as, taking make and finish into account, they are much cheaper than English. German brass hinges, 1½ inches, sell at \$1 (36.5 cents) per dozen pairs.

Brass bedsteads are almost all English.

OILS.

Linseed oil comes chiefly from England (*i. e.*, more thence than from elsewhere), but is also made in the country, at a factory here, as well as at some of the flour mills. Hitherto, it has been made from native seed, but some seed is now being imported.

Vegetable oil.—The German and United States imports have increased as the English has fallen off, the quantity of the latter dispatched in 1896 being less than those of either of the former.

Cocoanut oil.—There is a factory for making cocoanut oil, the copra for which is imported direct from Hawaii.

Painters' colors and materials.—These come chiefly from England, except turpentine, which is received from the United States. I am informed that the custom in selling paints is to sell four tins, which are supposed to contain in all 100 pounds of paint, or, say, 25 pounds each; but the continental tins frequently contain only about 20 pounds apiece.

Cordage and twine.—The local manufacture made from native hemp—similar to Russian, but said to be better—is protected and supplies the market in great measure; in tarred rope it does so almost entirely. Prices of latter are as follows:

Ratlines.....	per 100 pounds...	\$27=\$9. 83
Boltrope	do.....	26= 9. 49
Hemp tar rope.....	do.....	25= 9. 12

Hats.—The trade in straw hats of all kinds from Europe seems nearly divided between English and continental goods, but in soft woollen felt hats the latter prevail and to a greater extent than formerly. Prices are: An Austrian hat costing 20.75 francs (\$4) per dozen, less 2 per cent discount, placed in Hamburg, boxes and packing free; an Austrian hat costing 22.50 francs (\$4.34) per dozen, less 2 per cent discount, placed in Hamburg, boxes and packing free; an Italian hat costing 17.35 lire (\$3.34) per dozen, less 3 per cent and 1 per cent discount, placed in Genoa, boxes and packing all free.

REMARKS.

Before coming to the general causes affecting the diminished demand for British articles—that is, the reasons why these have been in many instances displaced to a greater or less extent by foreign goods—and the consideration of the question how the demand for them might be created or increased, it will be well, in the first place, to review the general form in which the import trade in Chile is conducted. The great bulk of it is not carried on directly between European manufacturers and dealers here; it is carried on by merchants established here who have their own houses or agencies in Europe. The business done by direct sale on account of European producers to dealers in Valparaiso, as indicated by the figures of drafts for collections in Valparaiso, which I have been able to obtain from four of the leading banks for three months, and after estimating for similar business through other channels, would appear to be something like £250,000 (\$1,216,625) per annum. Taking, say, £150,000 (\$729,975) for drafts against goods for other places sent through Valparaiso, we have £400,000 (\$1,946,600), and adding as much more for similar business done without drafts (that is, by buyers who are allowed to remit as soon as they can), the total will be only about £800,000 (\$3,893,200), or, say, less than one-ninth of what the customs figures for 1896 show as the total value of goods cleared from bond at this port. It would be impossible to obtain anything approaching exact figures in such a matter as this; still, those I have given may serve as an indication.

The business is mostly done, as I have said, by the European houses or the agents in Europe of merchants here, buying under the instructions of the latter; purchases are naturally made where what is wanted can be obtained at the lowest price and with the least trouble; English buy German goods and Germans buy English goods when it suits them, although doubtless both give the goods of their own country the preference if they can.

Proceeding now to the causes themselves, I am compelled at the outset to voice the general complaint which is borne in upon one of the great difficulty often experienced in inducing English manufacturers—

- (1) To take up a new pattern or design on a small order.
- (2) To make qualities very much lower than they have been accustomed to.
- (3) To make a low quality with a finish and get-up such as they might think belonged only to a higher class.
- (4) To send samples prepared in a sufficiently attractive form.
- (5) Generally, to attend to minutæ which might appear to them unimportant, but which may be very important as affecting the sale of goods here.

Causes which are apparent here are:

- (1) *Cheaper freights from foreign countries.*—These undoubtedly exist, at least on bulky goods, from Hamburg and Antwerp, and I have instanced some cases. I have already referred to the effects of the bounty given to French ships, and I now hear that the Compagnie Chargeurs Réunis is building three large steamers in France for the west-coast trade. A word or two in regard to the very fine German

vessels from Hamburg may not be out of place. These vessels are apparently worked entirely by their owner, and in his interests. The outward cargo consists chiefly of bulky and light goods; it is taken at very cheap rates of freight, but it is made a condition that consignees take their goods practically at once. The ships go alongside the custom-house mole like steamers, and are discharged in about a week. As they make very fast passages and sail from Hamburg at regular intervals, they are a favorite mode of conveyance for the class of goods mentioned.

(2) *Custom-house duties*.—There is no interpreting the law which taxes "with varying degrees of severity particular classes of goods produced by the several countries;" but there have been some remarkable exposés made, through the vigilance of the custom-house officials, of fraudulent entry of goods by certain foreign houses here, which indicate the possibility of such entry being not quite so uncommon as the Government do their best to make it. The extraordinarily low prices at which from time to time newly arrived goods are sold (not by English importers) are difficult to account for on any other hypothesis.

(3) *False marking*.—Trade-marks are not adequately protected in Chile; only an absolutely exact copy forms a sufficient ground for action. False indications of number, size, etc., exist in certain articles of foreign manufacture; but I have not heard of any which specially prejudice British manufactures.

(4) *Metric system*.—The adoption of this in its entirety would greatly assist British trade. Dealers in certain goods are, it is true, accustomed to the English length measures; but English weights are always very troublesome.

It should be remembered that goods, to command these markets, must be cheap.

IQUIQUE.

The conditions of trade here and in all the northern ports of Chile are exceptional. The country behind them is practically a desert, and the ports exist solely for the supply of necessities to the nitrate works (in the three northern provinces), mines, and smelting works. The major portion of the capital in the nitrate works is European, chiefly British. The truck system is in vogue at all these works, whether Chilean or European, and the supplies for the latter have hitherto been almost all imported. There are no large wholesale importers, except of iron work, machinery, and its accessories; but some of the substantial general stores in the town import themselves, besides buying in Valparaiso. In selling to the nitrate works, etc., the terms are cash on the 10th of the month following. The prices given here are either cost of import or price in Valparaiso under the conditions named in my previous letter.

MACHINERY, INCLUDING IMPLEMENTS AND TOOLS OF INDUSTRY.

It is extremely difficult to form a correct opinion as to whether the cheapest and most suitable machinery for nitrate working can be obtained from England or elsewhere, because an English management will usually get English, and a German management German, machinery. Probably the advantage lies with the English; but there are exceptions—*e. g.*, a German centrifugal pump to pump up the liquor at one part of the process was preferred in a certain English establishment on account of its being less liable to choke with mud, etc. Freight is in favor of the Continent. Portable railways, largely used in nitrate working, practically all come from Germany, the German make being lighter and cheaper than the English. A certain amount of work is turned out in Iquique, there being two large foundries

there; and the nitrate works themselves, being comparatively isolated, generally have machine shops capable of doing a good part of their own renewals. I was informed that two large Chilean modern nitrate works had everything made in Valparaiso except the engines and pumps, which came from England. The electric lighting of the nitrate works is leaving English makers, because there is a very capable resident representative of the United States Westinghouse Company in Iquique, who is always ready to negotiate for new installations, to supply small refits for American machinery, and, for a moderate monthly charge, to look after the electric plant continually; an arrangement which suits the companies well. Mining machinery, reported very good, is made in Caldera, at the works of the Caldera and Copiapó Railway. German metal retorts are preferred to English. I saw a number of the latter at a smelters under English management lying about broken. American iron body, brass-mounted globe horizontal, angle, check, foot, and safety valves are reported to come 25 per cent cheaper than English.

Hammers of 25 pounds weight for breaking rock or hard ground come from Germany 6s. (\$1.459) per cwt. cheaper than from England. An American mechanic's hammer, with handle, which is liked, costs \$14.50 (\$5.29) per dozen, less 70 per cent, 5 per cent, and 2 per cent in the United States.

German stocks and dies are reported to come 30 per cent cheaper f. o. b. than English.

IRON.

Bar iron.—I was informed by large importers who have their own house in England and none in Germany that they get this 5s. (\$1.21) per ton cheaper f. o. b. from Belgium than from England, and steel rails 10s. (\$2.43) per ton cheaper both from Belgium and the United States. Recently 25-pound rails for use on nitrate works came from the United States at £6 (\$29.19) per ton c. i. f. at Iquique; and 30-pound rails, which should be rather cheaper, at £6 10s. (\$31.63) per ton c. i. f. at Callao from England.

Belgian steel sheets, "ship quality," and American of very good quality, come 5s. (\$1.21) cheaper c. i. f. than similar English quality, and are used largely for tanks in the nitrate works.

Cast or wrought and all other iron and steel manufactures.—American steam pipes, I found out, are taking the place of all others, owing to their superior flexibility and strength. The small sizes, say up to 2 inches, I am informed, are about the same first cost as English, but the larger are cheaper.

Cast iron and malleable cast pipe fittings, such as elbows, tees, flanges, and crosses, as well as wrought-iron pipe fittings, such as nipples and couplings, come 25 per cent cheaper, I am assured, from the United States than from England.

Brass of all sorts.—Engine fittings—such as globe, horizontal, and check valves; radiator valves; gas, steam, and service cocks; steam whistles, water gauges, gauge cocks, air cocks, oil cups, lubricators, glass-body oil cups, safety valves—I am informed, all come 25 per cent cheaper from the United States than from England.

CONCEPCION.

PLATE AND PLATED WARE.

American cruet stands and such like articles, where glass is involved, are preferred to English, not because the American manufacturers beat us in the cost of the metal, but because they put in the cheapest kind of glass.

FURNITURE, CABINET, AND UPHOLSTERY WARES.

So far as I have heard and observed, there is little or no English trade in these, and with the new tariff it is doubtful if anything will be imported but upholstery materials. At the local factory here, I have seen good-looking, high-backed chairs, of the style used for dining chairs in the country, made of "lingue" (the native oak), with cane seats and backs, at \$85 (\$31) per dozen.

ARGENTINE REPUBLIC.

Buenos Ayres is many times larger than any other port or city of the Argentine Republic, containing, as it does, something like one-sixth of the entire population of the latter (664,000 by the last census, 1895, out of a total of 3,955,000), and it may fairly be said to be the one great business center of the country. As regards the import business more especially, the tendency of improved communication throughout the land seems to be to concentrate it more than ever in Buenos Ayres. I have therefore devoted to inquiry here almost the whole of the time I had allotted for investigating the question of diminished demand for articles of British produce and manufacture in Argentina.

From the official Government statistics, which are based upon custom-house valuations (mostly fixed by the tariff, not declared), I have extracted the following comparative table (given in gold dollars) of goods received from the six principal countries and dispatched for consumption from all the custom-houses of the Republic for each of the last ten years:

Country.	1888.	1889.	1890.	1891.	1892.
United Kingdom.....	*\$44,000,000	*\$56,800,000	*\$57,800,000	*\$28,300,000	*\$35,800,000
Germany.....	13,300,000	15,500,000	12,300,000	6,200,000	10,700,000
United States.....	9,900,000	16,800,000	9,300,000	3,400,000	7,400,000
France.....	23,000,000	30,200,000	19,900,000	7,900,000	10,400,000
Belgium.....	11,100,000	14,000,000	11,000,000	6,400,000	6,600,000
Italy.....	7,800,000	10,200,000	8,700,000	4,200,000	8,400,000
Other countries.....	19,300,000	22,100,000	23,200,000	10,800,000	12,200,000
Total.....	128,400,000	165,600,000	142,200,000	67,200,000	91,500,000

Country.	1893.	1894.	1895.	1896.	1897.
United Kingdom.....	*\$32,500,000	*\$35,600,000	*\$39,500,000	*\$44,700,000	*\$36,400,000
Germany.....	11,000,000	10,700,000	11,200,000	13,900,000	11,100,000
United States.....	9,600,000	10,100,000	6,700,000	11,200,000	10,100,000
France.....	12,100,000	10,200,000	9,100,000	12,000,000	11,000,000
Belgium.....	9,600,000	9,000,000	7,400,000	8,500,000	8,000,000
Italy.....	9,300,000	8,900,000	10,400,000	11,400,000	10,900,000
Other countries.....	12,100,000	8,300,000	10,800,000	10,500,000	10,700,000
Total.....	96,200,000	92,800,000	95,100,000	112,200,000	98,200,000

*The Argentine peso, or dollar, is valued at 96.5 cents.

This table does not seem to demonstrate as yet any serious comparative falling off in British imports as a whole, although in many directions, as will appear later, there has been a falling off. I say comparative, because, owing to the fact of the

tariff valuations being subject to revision annually, and to the impossibility of stating with accuracy what relations the valuations have all round to market values, these figures are more valuable in a relative than in an absolute sense, and the only sound comparison to be made from them is that of the percentages of the total in any given year with the percentages of the total in any other year.

Reducing the figures for the last five years just given to percentages of the total of each, we have:

Country.	1893.	1894.	1895.	1896.	1897.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
United Kingdom.....	33.8	38.4	41.5	39.8	37.1
Germany.....	11.4	11.5	11.8	12.4	11.3
United States.....	10	10.9	7	10	10.3
France.....	12.6	11	9.6	10.7	11.2
Belgium.....	10	9.7	7.8	7.6	8.1
Italy.....	9.7	9.6	10.9	10.2	11.1
Others.....	12.5	8.9	11.4	9.3	10.9

In making use of the foregoing figures, it must be remembered that the country of origin is given according to the port of shipment. For example, all goods from Antwerp appear as Belgian, though they may really be Dutch, German, or French.

DETAILS OF IMPORTS.

Alkali.—Soda ash for the soap makers and for whatever wool scouring is done (preparing wool for sale to the local factories, etc.) comes from England.

Caustic soda comes chiefly from England, but a certain amount was brought until recently from the Continent, and was reported purer of its kind. It is stated that caustic soda by the electric process is now offered more cheaply from the United States. Only 70° to 72° stuff is wanted here. The article is only used by more advanced soap makers.

Sulphate of copper seems now to come as much from the United States as from England. One importer says he now gets 98 to 99 per cent stuff at \$84 per ton c. i. f. by steamer from New York, put up in barrels of 100 and 75 kilograms (220.46 and 165.3 pounds), instead of 150-kilogram (330.69 pounds) barrels as from England, and in better barrels.

Arms.—Revolvers from the United States have the preference, but imitations are sold.

Carriages and wagons, railway.—The railways are all British, with the exception of one French and three less important lines which belong to the Government, viz: The Central Northern, from Tucuman north; the San Cristobal, from San Cristobal to Tucuman—both narrow (meter) gauge; and the Andino, from Villa Maria to Villa Mercedes, which is the standard gauge (5 feet 6 inches). The tendency of the British-owned lines is naturally to bring rolling stock from the United Kingdom or to make it themselves, although a good deal has come in the past from the United States.

I have visited the shops of the largest company and found them to be very extensive and complete. The company is going to build others on a more extensive scale. I noticed passenger cars on the American plan being built here and fitted with native cedar and lapacho (a wood similar to oak). Another large line brings its sleeping cars from the United States, finding that English makers can not turn them out so satisfactorily; again, another makes its own sleepers.

The Government lines are supplied by tender, and I was informed by the chief superintendent that recently the orders for the trucks for 2-axle broad-gauge wagons went to French makers, for 4-axle broad-gauge wagons to English, and for narrow-gauge rolling stock to the United States. I have since heard of an order for broad-gauge stock going there too. It is evident, however, from the statistics for "materials for railways" that almost the whole of these came from the United Kingdom in 1896.

White or plain piece goods.—The great bulk of these are still British, but there is a certain amount of competition in some directions—*e. g.*, American flannelettes, both white and gray, are preferred.

In some lines—*e. g.*, wove trouserings, etc.—German goods have for years had the largest sale, but now it is evident on all hands that the manufacturers which are coming to the front in most lines are the Italians. Their colors are bright and lasting, their goods are almost always made of granddrilled yarn, they are asserted to be at the front in the matter of original designs for buyers from this market to choose from, and if a buyer wants a particular pattern in wove goods they have a number of handlooms and colors at their offices and are prepared to make a sample and quote for it at short notice. The vast numbers of their countrymen in this Republic know and appreciate the goods—so much so that some Italians are suspected of selling Manchester trouserings as Italian—and, finally, they have the advantage of rapid and direct communication from Genoa at freights about one-half those from the ports of northern Europe.

American prints are also sold here to some extent; but, although they are nice goods, they are not a very serious factor so far in regular business, owing to manufacturers not being prepared to supply them according to a given assortment of patterns, so that importers here have to buy on the assortments offered and in large lots, while they may depress prices at times.

Wove colored goods.—The largest part of the trade in trouserings and colored wove flannelettes is Italian or German, and, if this is not so already in the case of oxforbs, checks, tickings, etc., it is rapidly becoming so.

Clocks and watches.—The following table shows the number imported from the chief manufacturing countries in three years:

Country.	1894.	1895.	1896.
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
<i>Gold watches.</i>			
France	3,571	2,509	3,792
Germany	826	339	243
<i>Other watches.</i>			
France	22,127	33,946	39,141
Germany	6,403	7,825	6,767
United Kingdom.....	117	503	328
<i>Clocks.</i>			
France	103	3,311	2,069
Germany	12,985	18,675	23,916
United States.....	11,104	3,513	8,977
United Kingdom.....	924	110	797

Cordage and twine.—Sisal cordage is best known and most generally used. It appears that for some time past the United States market has been the cheapest for this. Jute cordage from Italy, of excellent appearance, costing to sell about 23 cents gold per kilogram, was shown to me as sold as Italian hemp, which costs 20 per cent more. Cotton cordage and twine come from the United States, and

cotton waste is now beginning to come thence. A common kind of this is made in the country.

Earthen and china ware, including manufactures of clay.—German and Dutch wares compete seriously with British in common earthenware, being considered better and more carefully finished; in fact, the great bulk of that trade appears to be in the makes of those countries, but semiporcelain and stone china are all British. In porcelain, again, the trade is almost entirely German, Dutch, and French. Earthenware for construction purposes, such as closets, sinks, sewer pipes, etc., is all British. Earthenware vessels generally, for spirit merchants, brewers, oil merchants, jam makers, etc., do not appear to be used to any large extent; those which come in are mostly British, but I have seen table water bottles from Germany.

Furniture, cabinet, and upholstery wares.—Owing to the high tariff, the importation of furniture is of comparatively small importance and consists largely of cheap Vienna and American chairs. The native industry is an extensive one; it is mostly veneer work which is produced, and very little of it high class, the great majority being quite the contrary. Curtains and furniture stuffs, except silk plush, come chiefly from France in the case of the better qualities, costing, say, 4 francs (77 cents) per meter upwards, and from France and Germany in the case of lower qualities. Italy is competing in bands and tassels. Only a small percentage of this trade appears to be British, owing to the prices of British manufactures being too high and the demand running almost entirely on French patterns and styles.

Glass, rough or silvered.—Plain plate glass of all kinds for structural purposes (windows, doors, etc.) comes almost all from Belgium; looking-glasses, from Germany and France. The latter are also prepared here from imported glass.

The bulk of the import of flint glass is from the Continent, chiefly from Belgium; but common glassware is largely made here.

Common bottles are made in the country, and there is considerable import from the Continent.

Lamp ware, of glass and porcelain, or in which these materials predominate, is chiefly continental (German, Belgian, and Italian); but in all-metal, the United States is reported to do best. As regards packing of glass and porcelain, which is in casks, the English makers' packing is, I am informed, not sufficiently careful; moreover, they use old casks of odd sizes, which give a bad impression and make the importer think more of breakages. Casks from others come as they should—of one size, made (to all appearance) for the purpose.

Hardware and cutlery.—In cast-iron hollow ware, the tinned ware comes from England; the enameled ware comes mostly from Germany; but this is an article not much liked by importers, owing to the heavy claims for crackage, and the business in it is insignificant.

In wrought-iron hollow ware, the bulk of the trade is in German and French goods.

The United States gray enameled ware holds its own, but the trade in this description is not large. I understand that the United States is now trying to compete with the Continent in the regular white-white and blue-white ware; English manufacturers do not appear able to compete, and practically have not done so for years.

Wrought-iron enameled baths (for fixtures) come lightest and best from the United States.

Enameled ware is now being made in this country. I visited the factory, which began originally in a small way and came to grief. It is now in strong hands. Its output at present is about 1,000 pieces per diem, counting a pot and cover as one piece, and the managers hope to work up to 2,000 per diem, or, say, 50,000 dozens per annum.

Implements and tools of industry.—Picks, spades, shovels, and adzes come in largest quantities from the United States. The figures for four years are as follows:

Country.	1893.		1894.		1895.		1896.	
	Tons.*	Pounds.	Tons.*	Pounds.	Tons.*	Pounds.	Tons.*	Pounds.
United Kingdom..	88	194,005	77	169,754	85	187,391	195	429,897
United States.....	254	559,968	228	502,648	152	335,099	332	731,927
Germany.....	1	2,204	4	8,818	3	6,613	28	61,728

* Of 1,000 kilograms.

Scythe blades are much less used than formerly, having been superseded by machine mowers and weed cutters, which come from the United States; the scythe blades are mostly French.

Augers, gimlets, chisels, axes, and now files are chiefly English; but plane blades and saw blades (for mounting here) are French, and must have the French mark (Peugeot's). In two-handled cross-cut saws the English are preferred; but there is also a considerable sale of German saws of this kind of poor quality and much cheaper; whilst carpenters' handsaws come from the United States.

Coach wrenches come from the United States. All-iron wrenches come cheapest from Germany and France.

Carpenters' braces come cheapest from the United States.

Pincers are mostly French and German. French pincers cost as follows, per dozen, less 5 per cent, f. o. b. Antwerp:

Length in inches.	Price.	
	Francs.	
7	7.50	\$1.44
8	8.50	1.64
9	10.50	2.02
10	13.50	2.605
11	16.00	3.08
12	20.00	3.86

Hand pumps.—Ordinary single-action well pumps are American; also, the greater part of the double-action pumps. A common kind of semirotary pump has been coming freely of late from Germany.

Steam engines.—The railway companies being, as heretofore mentioned, almost all English, are naturally inclined to import locomotives, like other rolling stock, from England, and, as a rule, do so. I have heard of considerable orders having gone to the United States, not on the grounds of superiority or greater suitability to the country (whatever might have been the case formerly in this respect), but because British makers are unable to give early delivery; and the leading American makers have influential and active agents on the spot. Formerly, no doubt, for newly made and poorly ballasted lines, the United States made the most suitable engines, but the experience of the English companies here has proved that equally suitable engines can be made in England; and I was informed by the chief superintendent of the Government lines that they had obtained better engines for their narrow-gauge lines from a British maker than from the United States.

Machinery of other sorts.—In agricultural machinery, such as plows, reapers, shellers, and sowers, the United States seems now to do the biggest share of the trade—something like 90 per cent, I am assured. The British makers, as a rule, produce too heavy and expensive a machine. They are doubtless handicapped, to

some extent, owing to the want of equal facilities for employing the light wood-work which enters so much into American machines.

The bulk of the electric-light plant here and practically all the electric traction machinery is from the United States.

Small electric motors and fittings, too, are chiefly American. The American motor is neater, lighter, and cheaper. For example, I have seen a 3-horsepower American motor with a hook at the top for lifting it about, which was certainly a neater and less cumbersome machine than an English 2-horsepower one which was shown me. The English motor is often capable of working far above its indicated power, or, say, the power which has been indented for; but this is not wanted, and only adds to the cost. English makers, too, have given dissatisfaction in their careless packing of delicate machinery—*e. g.*, volt meters, which arrive broken, a thing which never happens when they come from the United States.

The hold which American electric machinery has obtained upon this market is sometimes attributed to its having been introduced in a more energetic and business-like manner, and there may be a good deal in this; but I am inclined to think, from what I have learned, that its perfection, as a rule, for doing its work, combined with the neatness and lightness of the American machinery, is what has kept it to the front. German machinery—frequently a poor and cheap copy of the American—finds a market, and even Italian work is now coming.

The American electric machinery is looked upon as the most advanced. The English, I am told, have not kept pace with the American improvements and new inventions, whilst the Germans have carefully watched and promptly copied the American.

Bicycles.—United States makes predominate. One make has a sale of some 2,000 machines annually, the market for which has been obtained by good advertising and push on the part of the importers, who are content with moderate profits—at first none at all.

In sewing machines, the German "Singer" is stated to be the cheapest in the market, and can be bought here for \$12 gold. The following figures showing the number of machines dispatched from the custom-house may be of interest:

Country.	1893.	1894.	1895.	1896.
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
United Kingdom.....	542	970	598	2,661
United States.....	5,564	5,173	4,769	4,960
Germany.....	10,767	7,778	7,029	11,358
Belgium.....	858	358	442	1,030

Pig iron is of comparatively limited use. In the statistics it is not separated from bar, rod, etc.; but I understand that the bulk is English, and the whole import probably does not exceed some 2,000 tons per annum. This would be much larger were it not for the fact that the railways are gradually replacing their old cast-iron "pot" sleepers with sleepers of native "quebracho" wood; and the former are readily bought by the local founders, for whom this source of supply is likely to continue for a considerable time, I understand. The only foundry work of importance, beyond the casting of refits, etc., for machinery in the local factories is that of cast-iron columns for building purposes.

Bar, angle, bolt, rod, and sheet (not galvanized) iron, or soft steel.—The trade in these appears to have been divided, roughly speaking, in recent years between England and Belgium, but the chief new competitor is expected by some to be the United States.

Boiler plates come from England and Belgium, as also do soft steel plates, generally. It is, however, to be noted that just now common iron plates and "T" iron have been bought from the United States, England being unable to compete in price.

Hoop iron has hitherto all come from England, but some is now beginning to be imported from the United States.

Galvanized sheets, corrugated and plain, come almost entirely from England. The figures, in tons of 1,000 kilograms (2,204.6 pounds), may be of interest:

Country.	1893.		1894.		1895.		1896.	
	Tons.	Pounds.	Tons.	Pounds.	Tons.	Pounds.	Tons.	Pounds.
United Kingdom..	10,735	23,766,381	15,540	34,259,484	16,290	35,912,934	22,609	49,843,801
Germany.....	17	37,478	1	2,204.6	155	341,713	508	1,119,937
United States.....			45	99,207	397	875,226	1,545	3,406,107
Belgium.....	75	165,345	434	956,796	1,175	2,590,405	241	531,308

Railroad iron of all sorts.—Steel rails, which are free from all duty when new, have hitherto come from the United Kingdom. In rails for tramways, however, a change is taking place. The 9-inch-deep rail, such as is commonly used in the United States, has been found to suit the pavement here best, and will undoubtedly be adopted in place of the 6-inch-deep rail hitherto in use. The management of a new electric street-car line tried hard, some time since, to have this 9-inch rail made in England, but in vain; makers had not made it before and did not want to incur the expense of new rollers. Now, all the tramways will require this rail, and they will get it in the United States.

Wire.—The fencing wire comes chiefly from the Continent, though recently some of the business appears to be returning to England. The imports of galvanized, including barbed, wire for four years are:

Country.	1893.		1894.		1895.		1896.	
	Tons.*	Pounds.	Tons.*	Pounds.	Tons.*	Pounds.	Tons.*	Pounds.
United Kingdom..	443	976,638	980	2,160,508	822	1,812,181	3,332	7,345,727
Germany.....	1,300	2,865,980	2,292	5,052,943	1,706	3,761,048	6,883	15,174,262
Belgium.....	1,705	3,758,843	2,382	5,251,357	4,068	8,968,313	4,113	9,067,520
United States.....	1	2,204.6	12	26,455	775	1,708,665	2,102	4,634,064

*Of 1,000 kilograms (2,204 pounds).

Tin plates.—The bulk of the imports is from England; it may be well, however, to note the figures of the leading countries, which are as follows:

Country.	1893.		1894.		1895.		1896.	
	Tons.	Pounds.	Tons.	Pounds.	Tons.	Pounds.	Tons.	Pounds.
United Kingdom..	1,773	3,908,756	2,647	5,835,576	2,804	6,181,698	5,178	11,415,419
Germany.....	8	17,637	19	41,887	8	17,637	812	1,790,135
Belgium.....	28	61,729	108	238,097	41	90,389	27	59,524
United States.....	133	293,212	84	185,186	41	90,389	216	476,194

There is a considerable fruit-canning industry in the country, and the various factories, as a rule, buy their cans, the making of which (together with other articles made from tin plates, such as margarin tins, tea canisters, oil drums, paint tins, cigarette and sweetmeat boxes, etc., as well as a number made from soft-steel plates) is conducted in several well-appointed works.

The demand for tin plates will no doubt increase with the development and increase of the country, but a new use for them has come into existence with a simple invention for catching locusts. This invention, I am told, is now adopted by the Government commission having charge of the measures for combating the locust plague. Last year, 6,000 cases of tin plates (practically the whole free stock in the place) were bought up by the inventor, and the invention was used, it is claimed, with perfect success.

Special plates, 1 meter long by 30 centimeters (1.09 yards by 11.8 inches) wide, will be required; and I am told that 20,000 cases of such plates, 150 plates in a case, are coming for this present season.

The chief biscuit factory which I visited makes its own tins and uses 3,000 cases of tin plates per annum.

Cast or wrought and all other iron and steel manufactures.—Wrought-iron building girders and columns form a comparatively large trade, mostly in the hands of Belgium, as will appear from the following figures:

Country.	1893.		1894.		1895.		1896.	
	<i>Tons.</i>	<i>Pounds.</i>	<i>Tons.</i>	<i>Pounds.</i>	<i>Tons.</i>	<i>Pounds.</i>	<i>Tons.</i>	<i>Pounds.</i>
United Kingdom.....	100	220,460	1,068	2,354,513	1,601	3,529,565	1,780	3,924,188
Germany.....	140	308,644	266	586,424	284	626,106	1,070	2,358,922
Belgium.....	2,144	4,726,662	7,382	16,274,357	8,922	19,669,441	7,414	16,344,904

Anchors and chains (the latter both for marine and land use) almost all come from England.

Galvanized pipes come from England mainly; but in steam and gas pipes United States competition is felt, and is beginning also in galvanized pipes. Joints of all kinds and cocks are mostly American.

Wire nails (Paris points) of all sizes are made in the country. Cut tacks come from the United States, as also do shoe nails mostly.

Bolts and nuts from 3 inches up are made here; but smaller sizes are imported, largely from the Continent.

Wood screws used all to come from England; but now Westphalia has almost taken the trade, simply through cheaper prices, as the quality is considered practically the same for this market.

Woolen, worsted, and mixed tissues.—The following figures regarding woolen and mixed fabrics, exclusive of blankets, hosiery, etc., may be of interest as showing the trend of the trade from the principal producing countries (custom-house value dispatched in each year):

Country.	1893.	1894.	1895.	1896.
<i>Pure wool.</i>				
United Kingdom.....	\$2,150,000	\$2,006,000	\$3,288,000	\$2,554,000
Germany.....	750,000	887,000	398,000	781,000
Belgium.....	421,000	470,000	285,000	438,000
France.....	1,099,000	904,000	965,000	1,572,000
<i>Wool and cotton.</i>				
United Kingdom.....	990,000	924,000	915,000	1,205,000
Germany.....	97,000	167,000	191,000	209,000
Belgium.....	67,000	83,000	56,000	76,000
France.....	44,000	32,000	60,000	72,000

MEMORANDUM ON THE LEADING ARGENTINE INDUSTRIES.

Textile manufactures.—For eight years past, in consequence of the protective policy which has been favorable to this industry, numerous factories have been established, some provided with considerable capital, but many with so little that they have not been able to maintain their existence. As a consequence of this protective policy, the national production has gradually at last dislodged all importation of common goods. The factories are worked according to the most modern American, German, and English systems, and are principally devoted to the manufacture of socks and chemisettes of cotton and wool of the ordinary kinds. These manufactures being in the hands of about twelve factories of importance, the production exceeds the consumption, and this has an unfavorable effect upon the price by forcing the sales.

Manufacture of shirts and linen.—This industry has greatly extended in the Republic. Only the higher classes of goods are now imported from abroad, and even these come only because of the morbid taste which makes people prefer foreign goods to native, though the latter may be quite as good as the former.

Manufacture of bags and sacks.—This industry, owing largely to the spread of agriculture, has increased to such an extent that from 30,000,000 to 50,000,000 of sacks are now sold annually (according to the year and the crops) in the country. The five principal factories are capable of producing more than 100,000,000 sacks.

Leather goods.—There are very old established factories for this article in the country, but the importance of the industry has vastly increased during the last ten years; for, whereas previously only skins and fells of a very inferior description were cured, the manufacture has now advanced in all its branches. Very few cured hides now are brought from abroad, and these are limited to patent-leather calfskins and dressed kids for the first qualities of shoes, saddlery, and articles de luxe. The number of leather manufactories which exist in the capital and in the provinces, taking only those of some importance, is about fifty.

Boots and shoes.—This industry which has for ten years past been exploited by four or five factories of greater or less importance, has been very profitable, but is now doing very little good, on account of the numerous factories which have been started. It may be affirmed that, owing to the keen competition, many manufacturers will become bankrupt, and those alone will remain in existence who practice the strictest economy and use the best and most modern appliances. The importation of foreign boots and shoes has become almost nil, in consequence of the heavy duty of 45 per cent, especially as the country itself produces the principal raw materials.

Iron foundries and machinery.—There exist in the country businesses which, in the twenty or thirty years during which they have been established, have so developed as to be able to claim considerable importance. The principal firms are occupied in founding supports, joists, bars, etc., including pieces of great size; they also construct machinery for general use, such as windlasses, winches, wheels, saws, as well as boilers and other smaller goods. At the same time, it is impossible to consider the manufacture of machinery in Argentina as of great importance, for the simple reason that, although the machinery might be made, it is not worth while to turn out only two or three machines after preparing the molds, and, as there would be no market for a greater quantity, those required by the country continue to be imported.

Manufacture of Paris nails.—There are two firms which supply the wants of the whole country in this respect. The manufacturers limit themselves to importing the wire, drawing it out to the required length and cutting and heading it.

Iron rivets and screws.—This industry was started fifteen years ago, and has

largely developed during the last ten years. As the import duty on these articles is 50 per cent, the introduction of large screws into this country is very limited, although the consumption of screws and rivets of small size is supplied by the imported articles.

Iron bedsteads.—This industry has so spread in the country as entirely to dislodge the foreign article.

Hats.—This manufacture has increased so extensively within the last ten years that the importation of hats is now entirely confined to two or three firms which import articles de luxe. The profits from this industry are excellent, and the factories are competent to increase their output to match the demand of the country.

Paper.—This industry is monopolized by the joint-stock company La Argentina, which has its factory at Zarate and was founded in 1888. Owing to the extent of its works and the influence it can bear, articles of the same kind as are made by its factory are burdened by such a high import duty that it may be considered prohibitory.

Beer.—This is a very important industry in Argentina. Many of the breweries are fitted with the latest machinery, and the importation of foreign beer has become almost nil.

Manufacture of carriages.—This industry has prospered greatly, nearly all the manufacturers being old-established firms, with good capital. Almost all the raw material for expensive carriages comes from abroad, and the rate of progress has been so rapid that carriages can now be manufactured in Argentina equal to the best imported, which, owing to heavy import duty, have almost entirely lost their market; while the pieces which compose the carriage, such as iron, steel, cloth, etc., pay only 25 per cent, and other supplementary articles, such as silks, moroccos, lace, etc., pay between 40 and 50 per cent.

Manufacture of scales.—This industry is almost monopolized by a firm which has been in existence for more than twenty-five years, and has slowly succeeded in winning the confidence of consumers. It manufactures all sorts of spring balances, from 250 to 50,000 kilograms (551 to 110,230 pounds), in every form, and adaptable to all the different industries of the country, having at last contrived to exclude the imported article almost completely. This firm has used North American types as a model and has been able, with success, to supplant the various cast pieces by soft iron, steel, and wood, obtaining in this way a greater durability in finished pairs of scales. This success is also due, greatly, to want of confidence in castings of local manufacture.

COAL BRIQUETTES IN WALES.*

The manufacture of coal briquettes, known as "patent fuel," is conducted on an extensive scale in this consular district and elsewhere on the seaboard of the South Wales coal field, and, along with the general coal trade, is making headway every year.

The first shipment at Cardiff was in the year 1859, when 4,700 tons were exported; and last year the total reached nearly 400,000 tons, to which must be added shipments from Newport and Swansea, augmenting the quantity named about 50 per cent. In fact, all the fine coal not used in the manufacture of coke—for which, by the way,

* This report was made in reply to an instruction dated October 25, 1898, sent by the Department at the instance of a resident of Kansas. Advance Sheets of the report have been sent to the inquirer.

the harder fine coals are not suitable—is utilized in making patent fuel, most of which is manufactured in this district. The exports are chiefly to European ports, at certain of which briquettes are also made on the spot from the imported coal.

A local manufacturer, Mr. T. E. Heath, says that thirty-odd years ago the "Coulliard" or ordinary French process was introduced into Cardiff, and, being found mechanically much more perfect than the old process—which was both slow and costly—soon became general. The great majority of fuel works here and abroad are merely modifications of the Coulliard. When the fuel is wanted for immediate use, it would be difficult to get a better; but a great objection arises from the steam being injected into the pug mill instead of having the mixture dried and heated by hot, dry gases. The steam condenses in the mixture of coal and pitch; and the blocks, when pressed, contain, therefore, not only the original moisture, very much increased in wet weather, but also the condensed steam which has been used to heat the mixture. As the blocks come from the press, and for hours after, they are visibly giving off vapor, and this goes on in dry weather until the briquettes become more or less porous; consequently, if it rains, as is usually the case, and they are afterwards exposed to frost, they fall to pieces. Such fuel can not be stocked without disintegration and considerable loss of calorific value; whereas, fuel made by a dry-heat process, which drives out the original moisture instead of adding to it, will remain for an indefinite period as sound as on the day on which it was manufactured. In fact, the fuel is thus superior to the best Cardiff steam coal, which loses by exposure more or less of its evaporative efficiency, as the pitch in the dry-heat fuel prevents the ingress of moisture and the egress of gases.

In this district, not so much attention is paid to the mechanical preparation of the coal used in briquette manufacture as in the various districts on the continent of Europe, where the coals are of a much poorer quality than those mined in South Wales. Once the due proportion of pitch for any class of coal has been found, the question of mixing becomes simple. A briquette is a compressed mixture of fine coal and pitch. The quantity of the latter varies according to the bituminous matter in the coal; the greater the amount of bitumen present, the less pitch is needed. The former, being adhesive, performs to some extent the same function as the latter; but the average proportion of pitch used is from 7 to 9 per cent. The preparation of the coal is limited to screening at the colliery and afterwards reducing it to as fine a condition as possible in a disintegrator, from which it is conveyed to the mixer. Here it meets the pitch, and is then taken to the heater. In each process, the coal and pitch are

intimately intermixed. In what is termed the melted-pitch process, the pitch is melted (sometimes with additions of common tar) prior to being added to the coal. In the dry method, which finds most favor the pitch is ground up with the coal in a dry state, both being heated as nearly as possible to the firing point of the pitch, in an externally heated chamber, until each particle of coal is covered with a film of melted pitch and so rendered fit for compression into blocks. The mixture or paste is said to contain from 3 to 5 per cent of moisture, in order to facilitate the sliding of the particles of coal ore on each other during compression; but manifestly, the heat causes such moisture to be thrown off quickly. After having been thoroughly mixed, the whole passes out of the chamber into a bin, whence it is conveyed in buckets of suitable size by means of an endless chain or belt to the press.

The compressing machines used may be roughly divided into three classes, irrespective of the nature of the power employed. These classes are: First, the single-compression machines, under which head should be placed the "Mazeline," "Stevens," and "Dupuy" presses; second, machines compressing on both sides of the briquette, such as the "Middleton," "Biétrix," and "Veillon;" third, machines acting by the tangential pressure of rolls, like that of "Fouquemberg," and those of the sausage-machine type, such as the "Bourriez" press.

As far as this district is concerned, the single machines appear to be common and the shape of the briquette rectangular. The best-looking kind that I have seen is the "sausage," being about 5 inches in diameter and to all appearance a solid piece of bright carbon. The rectangular blocks chiefly exported weigh from 20 to 25 pounds; and, as some markets demand smaller sizes, a division plate is inserted in the mold employed for the larger size, thus reducing it by one-half. For obvious reasons, the "ovoid" form of briquette is common, because there are no corners to chip off in the handling.

Hot from the press, the briquettes have little cohesion, and must therefore be treated with care in stocking and in loading. The endless belt saves a deal of labor both at the factory and at the ship's side, the donkey engine in the latter case being utilized in working an endless "hopper" at the side of the vessel, so that while one laborer is putting briquettes on at the bottom, another is employed in taking them off at the top and handing them to the loaders on the vessel.

Inquiries as to the cost of labor, fuel, supplies, and maintenance of a briquette factory show an average of half a dollar per ton, exclusive of the cost of materials.

It should be noted that almost any resinous or tarry matter may be used. For instance, seaweed boiled in water for some hours produces a glutinous mass, and acts as a good binding material if mixed with the coal dust in the pan. Again, fine sawdust, in the proportion of $7\frac{1}{2}$ per cent, mixed with the coal dust before going into the pan, improves the quality of the briquette. Of course, the quantity of each binding material can be best ascertained by experiment. Locally, "soft medium" pitch is used. Pitch, being a waste product, is subject to fluctuation both in quantity and in price; and at times a pitch famine, as in the year 1895, sends the price so high as to make the manufacture of patent fuel unprofitable. The inventive American has here an opportunity to make a fortune by providing a satisfactory substitute for pitch. Such substitutes as have been tried are said to have added 1 or 2 per cent of ash; and, besides, the fuel made by them goes to pieces in the first shower of rain.

In many parts of our coal-producing States, immense dumping grounds of unused fine coal might be utilized; and the one reason given by coal operators for not turning their attention to artificial fuel is the scarcity of pitch. This would not apply generally; and where pitch is obtainable at a moderate cost, it is to be hoped that immediate attention will be paid to this manufacture, and that elsewhere serious efforts will be made to invent a substitute which can be produced in unlimited quantities at a comparatively small cost.

The Iron and Coal Trades Review, in a special article on the French factories last year, says:

The plant now employed consists of two factories, one having three Révollier presses and the other four Biétrix presses. With the Révollier presses, the method of manufacture consists in taking the coal dust containing 14 to 15 per cent of water from the draining tanks of the washing house and tipping it into a pit, from which it is raised by buckets to a hopper in the upper part of the works. From another pit, dry pitch is raised in buckets to the same hopper. The buckets are so arranged as to deliver 9 per cent of pitch to 91 per cent of coal. After being mixed by passing through endless screws, the coal and pitch is "pugged" for eight or ten minutes in a pug mill. The mill is jacketed with superheated steam. The mixture then falls into the molds and is compressed by means of hydraulic rams, averaging from 142 to 156 pounds per square inch. This lasts about half a minute and leaves only 4 per cent of water in the briquette. After compression, the patent fuel is left on a haulage chain for forty minutes, when it is ready for loading. The three machines produce 240 tons daily.

With the Biétrix presses, the coal, before being pressed, is dried to remove the large quantity of water which it contains. The coal and pitch are mixed in definite proportions and carried by endless screws into a revolving reverberatory furnace. The mixture, after turning around from eight to sixteen seconds, is taken by an inclined creeper to the pug mill. It now contains from 6 to 8 per cent of water, which is further reduced by the press, the pressure being 2,300 pounds per square inch. Each press makes 22 to 23 briquettes per minute, or an aggregate for the hour of 330 to 340 tons daily. An auxiliary press makes round or "cannon-ball" briquettes.

The Biétrex presses only make one briquette at a time. The coal and ground pitch are raised by a Jacob's ladder to the upper floor of the factory, and each of them tipped into separate hoppers, two for the coal and one for the pitch. These hoppers deliver into rotary distributors, with recesses, moving at variable speed, and the proportion of pitch varying from 8.5 to 9 per cent. The distributors deliver onto a mixing screw, which in turn delivers onto the middle of a second endless screw, conducting the mixture into a reverberatory furnace with revolving sole, the two presses being fed by an arrangement of distributors, hoppers, and endless screws. The mixture is delivered in the center of the furnace, where, owing to the rotation of the sole, it is seized by a mixing arrangement, which stirs it while pushing it from the center toward the circumference. After remaining in the furnace from eight to ten seconds, the mixture, both dried and heated, falls into an inclined creeper, which raises it to the pug mill or mixing machine of the press, where it is subjected to a second stirring or pugging. The mixing machine delivers directly, by an adjustable outlet, onto the revolving table of the press, the recesses of which are filled as they travel underneath. After passing through the furnace, the mixture only contains from 6 to 8 per cent of water, instead of the 13 to 14 per cent which it contained before. In order to regulate the pressure, the beam crosshead is articulated to a piston working in an hydraulic cylinder with valves. The press thus makes per minute from 22 to 23 briquettes, of a weight varying from 84 to 87 pounds, which are received on carriages and carried to the loading place. Rope haulage is often used to lead the briquettes directly to the shipping station.

There are numerous methods in use for the manufacture of briquettes, founded more or less on the description of presses employed. In France, the principal types of press employed are those known as the Révollier, the Biétrex and the Zimmerman-Hanrez. As originally constructed, the Révollier presses made cylindrical briquettes; but, during the last few years, as much with the object of increasing the production as for giving the products a greater facility for stowage, the molds have been modified so as to produce rectangular briquettes. The dusty slack, from 0 to 9 millimeters, brought from the draining tanks of the briquettes washing floors in 20-cwt. wagons, is tipped into a pit and raised by a bucket chain to the upper floor of the works, these coals containing from 14 to 15 per cent of water. A bucket chain, placed opposite the former, brings to the same hopper the pitch, broken by a Carr disintegrator. The dimensions of the buckets of the two chains, their number, and their speed are regulated so that the proportion of pitch shall be about 9 per cent. The mixture of coal and pitch passes from the hopper into an endless screw, which, after a preliminary mixing, distributes it to other endless screws, directly feeding the pug mills or mixing machines, which, about 8 feet 6 inches high, with an internal diameter of 3 feet 2 inches, are steam jacketed and provided with an injection of superheated steam. After a mixing of from eight to ten minutes, the mixture falls through a movable door onto the mold that is being filled, where it is spread out and leveled with a shovel, the filled mold then passing on to be compressed. Large pumps are used to subject the water to a pressure often of 660 pounds to the square inch, finished by that of small high-pressure pumps, by which the water is subjected to a further pressure of 5,700 pounds per square inch, which, with a total effort of 540 tons on the hydraulic piston of 18 inches diameter, produces on the briquette a pressure of 142 to 156 pounds per square inch. One of these presses can make from 8 to 10 tons per hour.

The formation of fuel blocks by the admixture of tar with small coal has the drawback of increasing the amount of smoke developed as well as the disadvantage of a certain amount of disintegration, which takes place in the furnace as the binding substance melts. It has therefore been from time to time proposed to substitute

for bituminous matter glutinous, farinaceous, or starchy materials, and several patents have been taken out with this view. The first practical application of the plan is said to have been made under Barker's patent by the London Patent Coal Company, at Northfleet, and the system adopted was described by Mr. Bassett, C. E., about thirty years ago, before the South Wales Institute of Engineers. The small coal was tipped from the wagons into a chamber the bottom of which fell towards the center, whence it passed into a disintegrator and was reduced to one uniform size. It then entered a pug mill, into which was fed a continuous and regular supply of mucilage to be thoroughly mixed with the coal. This mucilage was composed of about 8 pounds of farina (potato starch) and 1 ounce of carbolic acid; the whole was mixed in about 25 gallons of boiling water and resulted in a paste or liquid glue. The above quantities gave sufficient adhesive compound for the formation of a ton of artificial fuel at a cost of about 1s. 2d. for the ingredient. After mixing, the blocks were formed in a brick or other molding machine, and required from nine to twelve hours to dry in a chamber heated uniformly to 300°. The advantages claimed for this fuel over that manufactured with pitch were that it gave considerably less smoke, and that there was no loss of efficiency in the furnace due to disintegration, as the action of heat tends to harden instead of to soften the farinaceous cement. On the other hand, the process was more costly than the ordinary one, in consequence of the cost of the mucilage and of the drying operation. When it became necessary to carry with more or less care and to pile in some order so low-priced an article as common fuel, the expense of such operations told heavily upon profits. The construction of chambers large enough to hold 50 or 60 tons of fuel spread out for drying is no inconsiderable item, to say nothing of the cost of maintaining them continually at a temperature of 300°.

At a briquette factory recently built in connection with the Fröhliche Morgensonne Colliery, near Wattenscheid, Westphalia, the slack is tipped into a storing tower, from which it is led to the point where its mixture with ground pitch is effected. The mixture is then led to a distributing hopper, and thence into two directly fired heating ovens. After the mixture has been thoroughly warmed, it is led to the Couffinhall presses, which produce briquettes weighing $6\frac{1}{2}$ to 11 pounds, three presses turning out 175 tons of briquettes in a day of ten hours. The larger briquettes are chiefly used for firing marine boilers, and the smaller for those of locomotives. There are four steam engines employed—one for the dry separation, one for the washing, one for the briquette factory, and the fourth for leading away the coal from the drying receptacles to the briquette works.

It is claimed for patent fuel that it is about twice as hard as coal, and in some works the minimum cohesion allowed is 83 per cent of lumps to 17 per cent of dust; the test being made in a revolving apparatus in which square chunks of fuel are picked up and let fall upon an iron-bar screen. According to Mr. Heath, large coal in similar chunks, tested in the same machine, gives only 40 per cent of lumps and 60 per cent of dust; and he tells of a cargo of fuel the cohesion of which was 83.10 per cent, shipped for a long voyage to a hot climate, which had a breakage of only 2.13 per cent and a wastage of 0.88 per cent, although the shipment was made in very wet weather.

With regard to calorific qualities, local experiments cited by a Mr. Colquhoun show, in three different tests, 8.41 pounds, 8.77 pounds, and 8.99 pounds, respectively, as the weight of water evaporated from

1 pound of fuel at 212° F., the average evaporative power of several of the best Welsh steam coals being 9.33 pounds; so that the artificial fuel is almost equal in this respect, besides occupying less space.

In order to compete with Cardiff in the South American trade, advantage should be taken of local experience in briquette manufacture. Those who intend to enter the patent-fuel trade will find several firms in South Wales prepared to accept orders for complete plants. One well-known firm is the Uskside Engineering Company, the managing director of which is a Mr. A. J. Stevens, who has had considerable experience in this line, the postal address being Newport, Monmouthshire.

As to the cost of the fuel here, I can only say that the market price is determined by that of coal itself, the normal figure being slightly under \$2.50 per ton, or about 50 cents below the present figures.

In conclusion, I desire to emphasize the desirability of establishing the manufacture of patent fuel in the United States, as I foresee that it will be developed into a most important industry.

DANIEL T. PHILLIPS,

CARDIFF, *December 24, 1898.*

Consul.

AMERICAN COMPETITION WITH BRITISH INDUSTRIES.

An elaborate review of the trade of Scotland in 1898 is published in the Glasgow Herald of this date. Each branch of production is covered by an article contributed by a technical correspondent. The review as a whole shows that 1898 has been an exceptionally prosperous year in the principal industries. There are several interesting and significant references to American competition. In the article on the steel trade, this paragraph occurs:

While considerable strides in the improvement and relative productive capacity of steel-smelting furnaces have been made during recent years, it is particularly noticeable that the Scotch ironmasters are content to allow their blast furnaces to remain with slightly increased capacity compared with many years ago, notwithstanding the enormous advance made by the American producers, whose extraordinary success seems to threaten the trade of the world.

The expert who writes on locomotive building, which has kept the works in Scotland fairly busy during the year, laments the absence of foreign orders and has this to say:

Our colonies and possessions have not made their weight felt to any great extent, but their contributions are always welcome, and help to fill up interstices in the

delivery sheets. New South Wales, Ceylon, and Uganda have each required ten engines for their current wants; and, when the smaller wants of the less important possessions are added, the market of the colonies and possessions makes an appreciable and appreciated show. South America continues closed, although within the last few days the Leopoldina Company has given out an order for fifteen engines. This almost solitary order, however, can not be looked upon as a proper awakening, and we must continue still to regard this market as under a cloud. Japan has been entirely absent this year from our market, but at the time of writing an inquiry comes for twenty engines for the imperial railways. Japan has had a chance of comparing British and American engines, as both types are on their railways in almost corresponding proportions. Lately the Americans have been, to a great extent, ousting the British from this market, owing greatly to the difficulty experienced by our home makers in giving early delivery; but there is a revision of feeling on the part of the officials in Japan towards British engines, and they now consider it worth their while to wait the necessary time and pay possibly a higher price for our engines. They find it both more economical and safer to adopt the British type, owing to its staying power and substantiality of structure, and that what may be saved in the initial cost of the American engine is more than lost in the frequent repairs necessitated by the relative weakness of its parts. In any case, the pendulum has swung strongly towards the British engine; and if British makers were in a position to give reasonably early deliveries, the American makers would not find Japan such a profitable market.

* * * * *

While the trade is so brisk with orders from our own more or less private markets, foreigners are making headway in markets open to all; and it is by no means certain that, when dull times come again, our home makers will be able to oust them from these markets where they have had such a long and favorable opportunity of establishing a firm footing. Home makers in normal times can not exist by British and colonial markets alone; and so while they are at present endeavoring to meet the urgent wants of these fields, they may be laying up for themselves a store of difficulty and trials, when the time comes round again when they shall have to fight for their existence on neutral ground. The market of the continent of Europe is already practically closed to them, as a result of tenderings in recent years seems to indicate that our home makers are unable to compete successfully with continental makers in purely continental markets. British activity has been America's opportunity, and the American makers have been successful in very many cases in securing orders from sources which have hitherto been looked upon as purely British markets. It may be, as in the case of Japan, Australia, and South America, that the American engine will ultimately condemn itself; but time will be required to bring about this, and so our home makers will have to face a new and formidable element in British markets when the boom has passed.

The system of inspection introduced and developed by Westminster engineers has recently been far more difficult and exacting than that required by locomotive superintendents on British railways; and, while inspection work has given employment to an ever-increasing army of inspectors, the result is the production of a locomotive which, if the most reliable, is at any rate the most expensive that can be made. Rejections of material in all stages of progress are of every-day occurrence, and the yearly output of British locomotive builders is consequently seriously restricted. American builders have as yet been able to retain in their own hands, not only the design of their engine, but also the decision as to the nature and the extent of the inspection to which their locomotives are to be subjected. This is one of the reasons why in an American locomotive shop for every five men employed a complete locomotive is turned out per annum, while it takes the labor

of about fifteen men for twelve months in a British shop to complete a locomotive to the satisfaction of Westminster engineers.

The fact that the Midland Railway Company recently placed an order in America for twenty locomotives would seem to indicate that the managers are not specially apprehensive of a failure on the part of American locomotive builders to meet the requirements of Westminster engineers.

In regard to agricultural machinery, it is said:

The Canadian and American makers still retain the bulk of this important trade, and every year sees the introduction of a new American competitor.

* * * * *

In the export markets, the Americans are our most serious competitors, and in the binder trade (one of the most valuable branches of the export trade) they have practically a monopoly.

The boot and shoe expert considers the condition of the trade to be far from satisfactory. The present depression and the main cause of it are thus described:

Eighteen hundred and ninety-eight opened gloomily in the boot and shoe trade. The dire effects of the great engineers' strike, which had just ended, only commenced to be felt in their intensity. The retail trade got alarmingly quiet, which immediately reacted on the wholesale manufacturers, causing widespread stagnation throughout the whole trade. To add to the dullness among manufacturers, a very large portion of our colonial trade was fairly wrested from us by our American cousins, who, at the moment of writing, have practically the whole boot and shoe trade of western Australia and Africa. Not only so, but American manufacturers have during the year pushed our home manufacturers severely for the boot and shoe trade of the United Kingdom, and have firmly established themselves in our midst. To our annoyance and irritation, it must be candidly admitted that their manufactures, for beauty of style, handsome appearance, and perfection of fit, excel ours; in their own words, they have gone "one better" on us. Our manufacturers hitherto have pretended indifference and looked wise, hinting that perhaps the wear will tell—a vain and delusive hope, which, unfortunately for them, has not been realized, for the best of all reasons, that the leather, both of uppers and soles, is the identical sort which our own manufacturers use in the greater portion of their goods. Humiliating as it is, it is nevertheless a fact that the Americans, in upper leather almost entirely and in sole leather to a great degree, completely eclipse our curriers and tanners, who are compelled to own that they must adopt American methods if they can hope to compete in the future. All this savors of despondency, and were it not that there is plenty of fight left in us the future would indeed be gloomy. The question continually asked in the boot and shoe trade is: How comes it that America is able to deliver to our very doors boots and shoes at prices considerably less than can be accepted by our own manufacturers; while at the same time American leather, of which by far the largest proportion of our boots and shoes are composed, is sold to our manufacturers at prices even less than to American manufacturers? And, to make the solution all the more obscure, it is also known, and proved beyond question, that the boot and shoe operatives in America earn wages almost double ours. This is the problem before our manufacturers, which has only one solution. American manufacturers work on a different method. They organize their factories upon a perfected system to produce the

finished article at the smallest possible cost of production. The bright side of the picture has now become apparent to our manufacturers, who mean to organize and train their operatives on the above lines; and, as one of the largest manufacturers stated in an interview with the writer, "We intend to work our factory up to its uttermost capacity." If the boot and shoe operatives in Britain can only be brought round to the opinion that restriction, under any circumstances, means ruin to the trade—also that increased production means increased prosperity—not only will our colonies be reconquered, but we will reestablish ourselves in our home trade.

EDINBURGH, *December 27, 1898.*

RUFUS FLEMING,
Consul.

SUGGESTIONS CONCERNING TRADE WITH RUSSIA.

Russia occupies an area of over 8,500,000 square miles, one-sixth of the land of the globe, with a population of 130,000,000 and an annual increase of 2,000,000. This includes one hundred and forty different races, 90,000,000 of whom are farmers. Siberia alone contains 250,000 square miles of land similar in all respects to that of Kansas and Nebraska, which is traversed by the great Trans-Siberian Railroad and is being settled by a constant stream of immigrants, who receive Government aid according to their needs and ability to till the soil.

This country certainly constitutes a world large enough to command the attention of the leading manufacturers and exporters of the United States, who are seeking a market for their surplus.

There is a general desire on the part of Russian merchants and dealers to make connections with American manufacturers, provided this can be done advantageously; but, as a rule, American houses have a general agent in England or Germany, who supervises their business for Europe and appoints subagents for Russia and other countries, and takes three-fourths of the commission. Russian agents object to dealing through an agent in London or Hamburg, and very much prefer to deal directly with the home company. As examples, some years since the Baldwin Locomotive Works and the Worthington Pump Company gave the exclusive agency for their goods in Russia to St. Petersburg agents, who deal directly with the home companies and now practically control the Russian market for locomotives and steam pumps, their trade amounting to millions every year; while agents for rival companies, who are subject to the orders of agents in England and Germany, are unable to compete with them. What has been accomplished by these companies can be done by others with equally meritorious articles.

CREDITS.

English firms give a credit of from nine to twelve months, the buyer usually accepting a draft payable at a London bank without interest, that being included in the price. Some English firms of German extraction give even longer credits and keep open accounts with regular customers, the buyer remitting at his convenience during the year.

The custom of German firms, where money is very cheap, is to give six months' credit and frequently from nine to twelve, while open accounts are common.

American exporters usually require payment at an American bank on the presentation of bills of lading showing the freight to have been delivered on board of a steamer at some leading seaport in the United States, which is well enough for cotton, rosin, and such other cash articles for which the United States is the leading market; but where there is sharp competition from England, Germany, Austria, Belgium, and France, the terms offered by these countries must be met to secure business. The experience of the Baldwin Locomotive Works and Worthington Pump Company proves that success can be best secured by the appointment of a general agent at St. Petersburg or Moscow who is familiar with the language and business methods of the country.

CIRCULARS.

American consuls in Russia are in receipt, by every steamer, of letters and circulars from American manufacturers, museums, and export associations making inquiries as to the prospects and methods of procedure, names of dealers, etc., to introduce their goods; but purchasers naturally desire to see and examine any article they are asked to purchase, and therefore circulars printed in English, which few merchants can read, are of little use.

The Russians have respect and admiration for the inventive genius of the Americans, and, while conservative, they are always willing and anxious to look into new inventions from the United States. It is absolutely necessary that our exporters should keep abreast with the new and more exacting requirements of trade. Circulars and catalogues printed in the English language are almost useless, as comparatively few business men have sufficient knowledge of the English language to understand them; hence, exporters who desire to do business with Russia should prepare special matter and have the same translated and printed in either German or Russian—preferably Russian—in order to save time and correspondence. They should state the price of the article offered, lowest rate of

discount, terms of payment in Russian values, and weights and cost delivered on board of a vessel at a prominent seaport.

The surest and best plan to introduce goods into Russia is to send samples by a thoroughly competent representative of the business it is proposed to push. While a knowledge of the Russian language is not absolutely necessary, as interpreters can be found in all the leading cities of Russia, yet an acquaintance with Russian, German, or French would be of great assistance in the order named.

TRANSPORTATION.

St. Petersburg is but twelve days' travel from New York, and the trip can be made with comfort and ease. The facilities for travel between London, Paris, Hamburg, Bremen, and St. Petersburg are practically the same as exist in the United States.

CLIMATE.

The Russians use the Reaumur thermometer, which places zero at the freezing point, instead of 32° above of Fahrenheit. Paradoxical as it may appear, the cold is much less felt in Russia than in western countries. The houses are adapted to resist the greatest amount of frost, and as a rule are too warm. Last winter was to a certain extent an exceptional one, as the mercury remained near the freezing point during the entire winter, only falling to zero Fahrenheit once during the season, comparing most favorably with the winter months in a majority of the Northern States; while the summer was delightful, the mercury ranging between 60° and 70° F., with nights sufficiently cool to sleep under blankets. During the winter months, there is less than seven hours' daylight, while between May and September there is no night.

The ground is covered with snow from the middle of November until March, and sleighs holding two persons with a good horse and driver can be hired at 60 copecks (30 cents) per hour.

MARKETS FOR UNITED STATES GOODS.

Articles of American manufacture, with the exception of portable and traction engines, thrashing machines, and plows, are preferred to those manufactured in England, Belgium, and Germany, our principal competitors. The American thrashers and engines are too light to stand the rough usage such machines are subjected to in Russia. On the other hand, there is a large and increasing trade in all parts of Russia in American harvesting machinery and farming implements, such as binders, mowers, reapers, hayrakes, etc.

The only plows used in European Russia are those manufactured in Russia and Germany, both giving satisfaction. American plows,

however, are very popular in Siberia and in the Amur region, one American firm in Moscow having just placed a \$10,000 cash order to supply that trade. The English formerly held the market, but of recent years they have been undersold by the Russians and Germans, whose plows can be purchased at one-third the price asked for English or American plows and on longer time; their retail price being from 25 to 28 rubles (\$12.87 to \$14.32) for single-furrow, two-wheel plow, and 30 to 38 rubles (\$15.45 to \$19.37) for double-furrow, three-wheel plow, which is much cheaper than American plows can be sold in Russia.

The Germans are constantly studying the Russian market, and manufacture articles in the style and manner they find specially adapted to the wants of Russian farmers. While England still furnishes Russia a few thrashers and engines, Germany practically controls the market.

It is gratifying, however, to know that the commercial relations between the Russians and the people of the United States were never so friendly or strong as to-day, and they are growing closer each year, by reason of better acquaintance and largely increased business relation. In this connection, I may be excused for quoting a recent cablegram from London to the St. Louis Globe-Democrat, which says:

The newspapers here to-day are giving voice to regrets expressed in the industrial circles of the north at not being represented abroad by diplomats as wide-awake and as ready to promote the trade of their country as the United States envoys. It seems that the American ambassador at St. Petersburg, hearing the other day that the Russian-Chinese Railroad was ordering a large quantity of rails and other railroad material, requested the manager of the company to defer the award of the contract till the American firms had had an opportunity to make tenders. Upon receiving an affirmative reply, the ambassador cabled to Washington, with the result that the Pennsylvania and Maryland Steel Company tendered and secured orders for 40,000 tons of steel rails and a quantity of other railroad material.*

The manufacturers here are now asking why it is that the British ambassador at St. Petersburg can not show similar care for the welfare and interest of his countrymen, or have afforded to English firms the opportunity of competing with their American rivals in these Russian-Chinese Railroad contracts. They are even going so far as to suggest that the British Foreign Office would do well to follow the example of the United States Government and select successful business men, rather than diplomats, for the posts of ambassador and minister plenipotentiary abroad.

Immediately after the award of the contract referred to in the above cablegram, a correspondent of one of the leading London papers said to me:

Your ambassador is a practical man; he sees and does things. Our people were very anxious to obtain that contract, and the bids show that it would have been awarded to an English firm but for the influence of your ambassador, who secured

* See CONSULAR REPORTS No. 213 (June, 1898), p. 236.

the postponement of the date for awarding the contract to enable American bids to reach St. Petersburg. However, that is business; and I only wish our ambassador would take the same interest in assisting English firms to obtain orders for English goods as your ambassador does for Americans.

Notwithstanding the rapid progress Russia is making in the establishment of manufactories, which are being encouraged by the Government, she is not able to keep pace with the increased demand for iron, locomotives, cars, coast steamers, battle ships, elevators, electrical apparatus and supplies, wood-working machinery, tin plate, agricultural implements, rosin, cotton, roofing slate, leather, scales, heavy ordnance, typewriters, tools, bicycles, sewing machines, hardware, coal and other machinery, photographic materials, as well as in other lines in which our supremacy is unquestioned. Russia offers such a rich field for investment and profitable trade that our manufacturers should study the market and methods of doing business. The Russian railway and manufacturing systems are now in their infancy, and there will be for years a constant demand for car material, railroad machinery, etc.

Our unprecedented export of merchandise during the past year shows that American manufacturers are studying the science of the export trade. They should understand that it is the buyer, and not the seller, who determines the kind of article he wants and the form in which he wants it turned out, labeled, and packed for shipment. It is the business of the seller not to attempt to force upon the customer something he does not want, but to ascertain what he does want and offer him a better article for the same or less money than he has been paying.

The United States almost controls the Russian market for harvesters, binders, mowers, reapers, hayforks, horserakes, and the smaller agricultural implements. The recent order* removing the duty on almost every article of this class of goods will make such reduction in their price as to place them within the reach of many farmers who have been unable to purchase them until now, and must largely increase their sale.

The number of representatives of American firms and corporations that visit Russia is increasing annually. Among those more prominent who were represented during the past year were Cramp & Sons, shipbuilders, Philadelphia; Carnegie Steel Armor Works, Pittsburg; Westinghouse Air Brake and Electrical Company, Pittsburg; American Ordnance Company, New York; New York Air Brake Company, New York; Union Iron Works, San Francisco; Pennsylvania and Maryland Steel Company, Baltimore; Fay-Egan Wood-Working Machine Company, Cincinnati; Stanley Works, New

* See CONSULAR REPORTS No. 216 (September, 1898), p. 74.

Britain, Conn.; Jackson & Sharpe Company, car builders, Wilmington, Del.; Pratt, Whitney & Co. and Colt Firearms Company, of Hartford, Conn.; Marion Steam Shovel Company, Marion, Ohio; St. Louis Cotton Company; the Waverly, Cleveland, Stover, and other bicycle companies—who carried home contracts aggregating many millions of dollars and expressed themselves as satisfied with the results of their visit.

The underwriters state that the losses by fire in Russia every nine years equal the value of all the buildings in the Empire. While some of the larger cities have a paid fire department, they have no steam fire engines or chemical fire extinguishers, depending upon the old-style hand-brake engines and taking their supply of water from hogsheads hauled to the fire on four-wheeled wagons. When a fire occurs in a suburb or town where the buildings are of logs, as is frequently found in Russia, the results are disastrous; and it often happens that entire villages are destroyed for the want of adequate protection. Russia offers a market for steam fire engines, fire extinguishers, hose, etc.

There is also a fine field for the introduction of electric street cars, passenger and freight elevators, improved flouring mills, planing mills to manufacture sash, doors, flooring, etc., in regular sizes, as well as improved coal and other mining machinery.

DIRECT COMMUNICATION.

In order to secure all the advantages of trade with Russia, we should enjoy the best possible facilities for commercial intercourse. These can only be had by means of a direct line of steamers between the leading Russian and American ports. In this connection, I desire to call attention to the fact that the United Steamship Company, of Copenhagen, has decided to establish a line of steamers between New York and Russian ports.* Mr. Niels P. Bornholdt, our efficient consul at Riga, has taken special interest in establishing this line, and it is largely due to his efforts and influence that this company has sent one vessel to New York and Boston and will soon send another. The establishment of direct communication will place our manufacturers on the same basis, except as to distance, as Germany and England. American goods sent to Russia are handicapped by the cost and delay of reshipment at Hull, Hamburg, or Bremen, and the cost of transportation from the two latter ports by rail. The Russian Government is now building an ice boat with 10,000 horsepower,† being the largest vessel of that character ever built, with which it is proposed to keep open the ports of St. Petersburg and Riga during the winter months.

* See CONSULAR REPORTS No. 220 (January, 1899), p. 110.

† See CONSULAR REPORTS No. 220 (January, 1899), p. 108.

PROPOSED EXPOSITION.

Ambassador Hitchcock has been consulting American residents of St. Petersburg and Moscow, as well as American manufacturers who have visited this city during the past year, as to the advantages to be derived from an American exposition to be held in this city in 1901, immediately following the Paris Exposition, as the best method of introducing and advertising goods and affording American manufacturers an opportunity to become acquainted with Russian merchants and familiarize themselves with the kind of goods adapted to this market and the methods of doing business. Such an exposition would result in the establishment of a Russo-American bank to handle American business, a commercial agency to report on the standing of business men in both countries, as well as an international express company and parcels post—all of which are essential to the proper development of trade with this rapidly growing country.

By a recent convention, the international money-order system between the United States and Russia will go into effect on the 1st of January, 1899.

W. R. HOLLOWAY,
Consul-General.

ST. PETERSBURG, *December 29, 1898.*

LAND TENURE IN RUSSIA.

The chargé d'affaires ad interim at St. Petersburg, Mr. Peirce, writes, under date of November 15, 1898, in regard to the shortage of crops in Russia. This is partly to be ascribed, he says, to the thriftlessness of the peasant class, which thriftlessness has been variously attributed to climatic influences, to intemperance, to administrative methods, to the former condition of servitude, to the mir or communal system of land tenure, etc. The last-named cause especially, Mr. Peirce thinks, would be sufficient to explain a general lack of self-reliant industry among the people. He continues:

The land of the peasantry is not generally owned by them individually, except in certain districts of the Baltic provinces, of Little Russia, and of Poland, but is held by them in communities, or mirs, in which each tax-paying individual has a share and for the taxes of which he is responsible. The taxes due to the Government are assessed upon the number of "souls" in the community, and upon the same basis is allotted to it a certain quantity of land. This land is sold, not given, to the mir, and payment therefor is made by amortization from a certain proportion of the taxes. For these taxes the mir is held strictly and rigidly responsible, but it is permitted to collect the amount from the individuals of the community as it may

see fit—of course, within certain restrictions. The mir, therefore, constitutes a community having a considerable degree of self-government. It elects its officers by popular vote and regulates its own financial affairs, in which it is not molested by the Imperial Government so long as it continues to make its full tax returns. To each "soul" is allotted, by the authorities of the mir, a certain proportion of land of three separate sorts, viz, cultivable, pasture, and marsh or meadow, according to his ability to work the land productively in the interest of tax payments. Thus, a man who has a horse is given more land than he who has not, while one who has able-bodied children, sons or daughters, is given more than the man who has no one to help him in his cultivation; the incapacitated being given nothing, but are supported by the community. In these allotments, the ownership of the land does not pass to the individual; he is simply given the usufruct for a certain term, and the duration of that term varies in different mirs from one year to ten or even more—from three to five being the most usual—with a general tendency to increase the length of the period. In this allotment the individual has no option. He may argue his case before the board of officers of the mir; but he must, perforce, assent to accept the allotment of land made him, together with the share of taxes devolving thereon. In general, it is said that these apportionments are made in a spirit of equitable fairness, but that abuses do exist is not surprising. It occasionally happens, for instance, that a peasant having a reputation for expertness at some trade which brings him custom from the neighboring large proprietors or from other points outside the limits of the commune, by means of which he earns money in excess of what his labor in the fields could produce, has fastened on him an excessive proportion of communal land and consequent taxes.

While in the more productive districts, and especially in the black-earth belt, the effort on the part of the individual is to secure as much land as possible, in the northern and other unproductive districts the peasant tries to shirk his communal responsibilities by presenting reasons why he should be allotted the minimum of land.

Not infrequently the peasant seeks employment in the cities, either for the entire year or, what is still more common, for the winter months only. This may happen owing to one or more of several causes. He may be sent by the head of the family to which he belongs to earn money to assist in paying the joint share of their communal taxes, his allotment of land being, if the absence is during the summer season, operated by the other members of the family; or he may, upon his own account, desire to add a little to his income, or even, finding his land unprofitable, he may abandon its cultivation

to seek a livelihood in the city; but whatever may be the cause of his absence from the mir, he does not escape his responsibility for the taxes. For, while the Central Government permits the mir to collect the taxes from the individual, it also assists it in so doing by keeping track of him, and by returning him to the mir in case of his failure to remit his share, and even by inflicting punishment, when the resources of the mir in that respect fail to compel him. Still further, the complaint of the head of a family to the mir that an absent member is not remitting his share of the taxes on the family allotment may cause the delinquent's arrest and return to his commune.

Individuals who misbehave themselves in the city may also be sent back to their mir by administrative process. Thus, I have myself seen an insolent and intractable servant brought at once to perfect submission by the threat of reporting him to the police and requesting his return to his commune. To render possible this control of the individual requires a very careful system of enregistration. Thus, on taking up a new habitation, every sojourner and inhabitant in a city must be duly inscribed in the books of his police district, and for such enregistration the proprietor of the house is held accountable. As it not infrequently happens that the peasant, or "mujik," knows no other than his baptismal name and that of his father, and sometimes not even the latter, the difficulty of keeping track of individuals can be imagined. Ivan Ivanovitch (John, son of John), of such a mir, may be, and not infrequently is, the sole designation he can give himself and perhaps, even, he can only say that he is John, son of a soldier. But the name of the mir to which he belongs is inscribed on his passport when issued to him, and without this document he is not permitted to remain in any city; nor, indeed, is it easy for him to find any abiding place.

It will be seen, therefore, that the mujik is closely bound to the soil through the medium of his mir. But further, the mir is obliged to take care of him. It can, while he is able to labor, force him to pay his share of the taxes; but if he becomes incapacitated, it must at least keep him from starvation.

The house of the mujik does not stand in the middle of his little farm, but in the village street, and this building, with its small surrounding lot, belongs to him or to his family; but the productive land lies sometimes versts away from the village and consists of a long, narrow strip, or perhaps several of such strips, apportioned with a view to giving to each "lot" an equal share of the best and of the poorest soil.

The inevitable result is that the mujik, feeling that at the end of a period more or less brief his allotment will be subject to a redis-

tribution—in which, if he has improved it by careful cultivation, expending upon it time and money with an eye to the future, the greater part or it will probably be taken from him—puts into his land only such cultivation as will give him, for the existing season, the best returns, without expending upon it capital or labor of which he is not to enjoy the full fruits. Hence, he plows but the top of his soil, not only to save labor, but that his manure may be consumed by his own crop and not by a future one. He has no attachment to the soil to which he belongs, but which does not belong to him, and he is devoid of that self-reliant independence which characterizes the agricultural classes of other countries. If we add to this the absolute fatalism with which the mujik regards every event of life, whether of good or evil fortune, we have, it would seem, a combination of temperament and surroundings well calculated to develop thriftlessness.

In those parts of Little Russia, the Baltic provinces, and Poland where the mir system does not exist, not only is the peasant more animated and cheerful, but much greater thrift prevails.

It is now some months since the attention of the Emperor was directed to the unfortunate condition of things existing in many of the agricultural districts, and he has directed, not alone that material aid from his privy purse be liberally extended, but that full and exhaustive reports upon the entire condition of the peasant in the various parts of the Empire be furnished him, with a view to discovering the exact state of affairs and, if possible, the true causes to which are to be attributed the alleged distress, with a view to its intelligent amelioration.

ADVICE TO EXPORTERS TO CHINA.

In his annual report (to appear in *Commercial Relations*, 1897-98) Consul-General Goodnow, of Shanghai, says that the fact that trade with the United States increased in spite of the decrease of shipping consequent upon the war with Spain and the disturbed political conditions in China shows the solid basis of mutual demand. The great staples of export from the United States to China—kerosene and cotton goods—were in greater demand in 1897 than in 1896. The imports from the United States into Shanghai in 1897 were valued at about \$8,000,000. He continues:

We do not advertise enough here. I do not mean by this newspaper advertising or advertisement by circulars. These appeal only to the few thousand foreigners sojourning here, but do not reach the hundreds of millions of Chinese. They will learn to appreciate our

goods only by seeing them. I do not know to-day where in Shanghai I could buy an American hat or shoe or underwear or collars or furniture or a telephone of improved quality or a magazine. I might make this list much longer. What goods we send here are usually put into the hands of people of other nationalities, who do not exploit them. I hope to see an exposition of American goods here in Shanghai, managed by Americans. It would pay to put one also in Canton and one in Chefoo or Tientsin.

In the next place, we do not cater to the trade here. Our steel mills have not supplied the rails for the railways in northern China, because the pattern is English, and to make them would necessitate new rolls. The cotton men are just beginning to inquire if the widths, etc., they have been accustomed to make in America are what are really wanted in China. Only one American life insurance company has reached out for this trade with any vigor. If this trade is to be taken and kept by America, its needs, customs, and superstitions must be studied on the ground by experts in each department.

In the third place, our merchants must be willing to settle disputes in regard to damages in shipment and disagreements as to quality and breaches of contract as is done by English and Germans. The average dealer here will pay a higher price for an article if he knows that a cheap and speedy method of settling any possible dispute can be had. Methods of packing, means of transportation, exchange, banking, etc., must be studied by experts, each for his own line of business. But all must show their goods to the Chinese, must study the wants of the trade, and must favor it by facilitating settlements of disputes.

The ease with which the viceroy at Canton was induced to protect, in his province, an American firm in the ownership of certain trade-marks, and the certainty with which the Chinese courts in this city protect foreigners in trade-marks and copyrights, leads me to believe that a treaty protecting our people in their patents, trade-marks, and copyrights may be obtained. The proverbial imitateness of the Chinese makes such a treaty highly desirable, all the more as our trade grows larger and more varied.

NOTES.

Automobiles in France.—Consul-General Gowdy, of Paris, in his annual report (to appear in *Commercial Relations*, 1897-98), says:

During the past year, there has been a marked increase in the adoption of automobiles, not only as pleasure vehicles, but for practical application in the way of cabs serving the public in the city of Paris, and for business purposes in the way of delivery wagons, especially those for long distances. It is announced that at the beginning of next year there are to be 100 motor cars driven by electric power running in the streets of Paris; and, if the experiment be successful, the cabs will be increased to 1,000.

With this project in view, a large plot of ground has been acquired, where the building of works necessary for the housing of the cabs and the machinery for the electric supply are being rapidly completed.

A training ground has also been made for the cabmen. This is laid out with every possible form of paving—wood, asphalt, stone, etc.—including two steep hills. Here and there are dotted about a number of dummy figures, and in and out of these the cabmen have to maneuver, under the orders of an instructor. As a rule, in four lessons, it is stated, the driver is ready to navigate Paris and after ten lessons is considered thoroughly competent. Each cab is supplied with sufficient power to be driven 30 miles at about 8 miles an hour.

Among the systems of automobiles in Paris, there are many using essence and petroleum, which called forth a most pronounced objection from the public by reason, first, of the odor following their passage; second, the noise; and third, for the passengers, the extraordinary vibration. A consummation of great value would be a machine which would combine durability, speed, and economy without these annoyances and defects.

Agriculture in Scotland.—Consul Fleming, of Edinburgh, sends an elaborate report (the full text of which has been transmitted to the Department of Agriculture) of experiments on Lord Rosebery's home farm, 8 miles from Edinburgh. The experiments, he says, have already had a far-reaching effect on the agriculture, not only of

Scotland, but of England. One of the objects is to test the accuracy of certain biological principles maintained by Mr. John Hunter, F. I. C., F. C. S., Edinburgh, who has superintended the experiments. The importance of the use of lime compounds in the surface soil for the efficient operation of the advantageous organisms has been demonstrated. A heavy dressing of caustic or hot lime is injurious rather than otherwise; but a small annual dressing of ground lime, supplemented by nitrogen phosphates and potash, has had a markedly beneficial result. A heavier dressing is effective in combating the finger-and-toe pest. Special attention has been given of late to the production of disease-resisting turnips, in the same way as new varieties of disease-resisting potatoes have been produced in recent years. Experiments in this direction have proved successful. Other points demonstrated were the superiority of ammonia salts to nitrate of soda, and the saving of manure by improved systems of farming.

Mr. Fleming says that the wheat area in Scotland in 1898 was 55,875 acres; barley, 237,970 acres; oats, 955,933 acres. The acreage in barley is increasing, owing to the demand of the distilling industry; the extent of land under cultivation in other cereals is diminishing. The crops will be excellent, wheat yielding 55 to 60 bushels per acre and barley 50 to 60 bushels. There are 1,246,28 cattle, 7,587,948 sheep, and 134,116 pigs in Scotland. The cattle industry is steadily advancing.

Notes from Uruguay.—Minister Finch transmits from Montevideo, under date of October 29, 1898, copy of the annual report of the directors and managers of the Central Uruguay Railway of Montevideo for the year ending June 30, 1898. The report shows the gross receipts for the railway during the year to have been £304,949 (\$1,484,034), against £271,652 (\$1,321,994) in the previous year; and the working expenses to have been £158,844 (\$773,014), against £156,557 (\$761,885). The increase in the net profit is 26.94 per cent. The receipts from passenger traffic show an increase of 8.96 per cent and from luggage and parcels an increase of 1.11 per cent. The receipts from goods traffic show an increase of 11.82 per cent and from animals an increase of 41.65 per cent. There were increases in the amounts of wool, hides and skins, and hay transported, as well as in wire and posts and building materials. Grain showed a decrease. The new passenger cars that have been added to the rolling stock during the year are lighted by electricity.

Under date of November 3, Minister Finch writes that an additional loan of \$2,600,000 has been authorized by the Government, to be used in settlements of claims growing out of the civil war of 1897.

Locusts in Paraguay.—Under date of December 6, Consul Ruffin, of Asuncion, writes:*

Among the worst pests with which Paraguay is infested are the grasshoppers, which are almost as large as small birds. The name of locust is given them, but they are more like what we call grasshoppers. A Government commission to study the question of their extermination has been appointed, and in the last few days a law compelling everybody to help kill the grasshoppers or pay a fine of \$20 paper (equal to about \$2.75 gold) has been passed. The young ones, unable to fly, are killed, the method being to drive them into a long trench and cover them up. If the inventive genius of the United States could supply the country with machines to kill both young and old, much profit would result. The grasshoppers, sometimes for a whole day, obscure the brilliant tropical sun in their flight and make it appear as though the weather were cloudy; they also impede railroad trains. The following article appeared in the *Prensa* Saturday, December 4, 1898:

REMEDY AGAINST THE LOCUSTS.

Several German planters have put into practice, with the best results, a system which is used in Africa to destroy locusts.

In a demijohn of water are mixed about 16 quarts of the following substances: Half a pound of caustic soda, 4 pounds of sugar (unrefined) or 6 of molasses, and 2 or 3 ounces of arsenic. This is used for watering the leaves, the odor attracting the locusts from a distance. The insects which eat the leaves die, and those which eat their dead companions suffer the same fate.

The solution has been tried in Villa Risa by several parties, among them an English doctor, the result being satisfactory.

I would advise anyone who can offer some solution of this question to write to Señor Don José S. Decoud, Minister of Foreign Affairs, Asuncion, Paraguay, who speaks and writes the English language.

Locusts in the Argentine Republic.—Consul Ayers, of Rosario, under date of December 9, 1898, writes that by reason of the continuous onslaught made on the locusts through the efforts of the commissions, aided by a lately developed natural enemy—the Champi beetle—the injury to the crops so far has been very slight. The consul incloses a letter by an American—Maj. O. C. James—describing the beetle, which, it appears, feeds upon the eggs of the locust. The letter reads, in part:

The "Champi" is the most effective locust-egg destroyer we have in Argentina. He is a dirty blackish beetle, the larger species being a little more than 1 inch long by half an inch broad, and must be looked for closely where locusts are laying their

*Copy of this report has been sent the Department of Agriculture.

eggs or his presence may not be discovered. Both the mature insect and its larvæ feed upon the eggs of the acridian in large numbers. These beetles belong to the genus *Trox* of the family *Scarabæidæ*. Ordinarily they feed upon dead animals and animal matter more or less desiccated. How they have developed the habit of feeding upon locusts' eggs is a mystery. Still, it might be imagined that the steps from a carrion-feeding habit could develop that which the insects now possess. In a country where hundreds of dead animals are left scattered over the pampas to decay, these insects have become plentiful. The eggs of the locusts are covered with a frothy exudation that soon becomes strong smelling and attracts the beetles, who devour them.

The full text of the report has been sent to the Department of Agriculture.

Railway Enterprises in Chihuahua.—Under date of December 31, 1898, Consul Kindrick, of Ciudad Juarez, says:

Mr. Enrique C. Creel and Mr. Federico Duclos, of Chihuahua, have been granted concessions by the Mexican Government for the construction of several lines of railway to connect with various mines and the Mexican Central Railroad.

One branch is to be constructed from a point on the Mexican Central, in the neighborhood of Chihuahua, to the mining camp of Santa Eulalia. This concession provides for the laying of branches to the Descubridora, El Oriental, and Occidental mines, and to the Cameros zone, to the northeast of the city of Chihuahua.

Another line will connect Villa de Aldama with the Mexican Central; and two additional lines of road will connect the Chihuahua and Pacific Railway—now being constructed westward from the city of Chihuahua—with the mining camps of Magistral, Concheno, Pinos Altos, and Jesus Maria.

The concession was granted December 24, 1898, and provides that work must be commenced within two years; that no less than 20 kilometers (12.42 miles) of road must be laid every two years; and that the lines must be completed within ten years from the date of the concession.

New Railways in Mexico.—Consul-General Barlow, of Mexico, on January 17, 1899, writes:

The Mexican Senate has approved the contract dated October 12, 1898, between the Secretary of Communications of the Republic and José Maria Botella, for the construction of a railway from Parral, in the State of Chihuahua, to Minas Nuevas, with the privilege of extending the same to the mining district of Concepcion. The Senate has also approved the contract with Mariano Gallardo and Anacarsis Peralta for the construction of two lines of railway in the

States of Tabasco and Chiapas, the starting point of one of which is Pichucalco, to strike the River Blanquillo at the most convenient point; the other to run from Teapa to the most convenient point upon the river of the same name. Interested persons may be able to reach the concessionaries of these projected lines by addressing them in the care of the Minister of Communications.

Protection of Designs at the Paris Exposition.*—With reference to the rights of foreign exhibitors at the Paris Exposition to protection on designs, Consul Halstead, of Birmingham, under date of January 9, 1899, sends the following:

The Paris correspondent of the London Daily Telegraph writes:

As a recent decision of the Paris court of appeals in a case bearing upon foreign industrial designs has produced a very bad impression on your side of the channel, English manufacturers who intend to take part in the exhibition of 1900 having been warned that their own designs may be copied with impunity by French manufacturers if they have not themselves a manufactory in France, I am glad to be able to give some completely reassuring information on this subject. As a matter of fact, a law for the protection of the foreign designs exhibited is invariably passed before each world's show comes off; and I am able to state on the highest authority that at the present date the exhibition officials and the ministers of commerce are engaged in drawing up a bill to this effect. It is certain that the decision of the appeal court will be provided against in the new law. Moreover, a measure for the extension of protection to industrial designs in general has lately been adopted by the Senate, and will be discussed by the Chamber of Deputies when Parliament assembles; therefore, there is not the slightest doubt that designs will be fully protected at the forthcoming exhibition.

Value of Promptness in Filling Orders.—Consul Halstead writes from Birmingham, January 9, 1899:

A London gentleman interested in railroads in many countries and for several years the president of an American railroad as a representative of British stockholders, has written me, in part, as follows:

I have read the leaders and the extracts from your annual report in the Birmingham papers with more than ordinary interest, for the work is conducive to the advantage and prosperity of both hemispheres.

One point I venture to suggest, viz, that promptitude in every case will secure business. Recently, I found it expedient to give to United States manufacturers orders for railway engines to be used on roads abroad, because they could be delivered from America in as many weeks as English manufacturers required months to fill them.

In my opinion, a great revolution in railway management is impending in this

* See also page 468, *ante*.

country, and it must be brought about on American principles. Cheaper rates, larger cars, and greater rapidity of service are essentials which the trade and traffic of this country must and will impose on the administration of railways, which, in my humble judgment, must adopt a more up-to-date policy if it means to do justice to the requirements of the age.

Bleaching Powder in Germany.—Consul Brundage, of Aix la Chapelle, under date of December 12, 1898, says:

A short time ago I heard that a chemical-manufacturing firm had a representative in the United States and expected to erect a plant for manufacturing chloride of lime, commercially known as "bleaching powder." Last week, the same party informed me that a contract had been closed with a New York firm for 4,000 tons of bleaching powder at \$18.50 per ton, or 8.20 marks (\$1.85) per 100 kilograms, to be delivered free on board steamer for export to the United States, during the year 1899. My informant added that labor and materials being high in the United States, and the duty being one-fifth of 1 per cent per pound, they would manufacture here.

I asked him if that was the price they sold it for here in Germany? His answer was: "No, we do not sell it here for less than 12 marks per 100 kilograms; but, in order to compete with England, we must sell at that price in the United States or lose the market." I then asked if they could make money at that price, and was informed that the company did not do business for nothing.

I thought this information might be of interest to the United States trade.

Sugar and Cereals in Germany.—Consul Erdman writes from Breslau, under date of December 3, 1898, that the growing crops of wheat, barley, and other small grains appear to be favorable. The estimates on oats are higher than in the last five years. The fruit crop was poor.

The quantity of sugar to be ground in Silesia shows a decrease of 1,124,950 centners (124,003,238 pounds), as compared with last year, the total quantity of beets being estimated at 17,655,000 centners (1,946,110,650 pounds). The sugar mills in Posen also show a decrease of their consumption of sugar beets. The amount of sugar beets consumed in the whole Empire of Germany in October, 1898, decreased 3,830,000 centners (422,185,900 pounds) as compared with the same period of last year. The prices for raw and refined sugar have risen from 5 to 8 cents per centner (110.23 pounds).

The full text of Mr. Erdman's report has been transmitted to the Department of Agriculture.

Bremen Regulations Regarding United States Fruit.—

Under date of December 20, 1898, Consul Lange, of Bremen, says:

The very good results of the regulation recently passed by the Bremen senate regarding American fresh fruits and live plants, which I made the subject of my report of November 3, 1898,* are already most perceptible. A shipment of 200 barrels of American apples and 2 barrels of American pears arrived at Bremerhaven a short time ago, and the entire costs for inspecting this shipment by an expert amounted to 8 marks (not quite \$2). This should be encouraging news to our dealers in fresh fruits. They should, however, exercise the most scrupulous care in executing orders, and ship none but the very best goods. There is so great a demand for American apples and pears here that they should command good prices.

Trade Possibilities in Denmark.—Consul Halstead, of Birmingham, under date of January 10, 1899, says:

The inclosed card, addressed to the editor of the London Daily Mail, draws attention to trade possibilities in Denmark and should receive some attention.

TEN MILLIONS A YEAR.

If English merchants make an effort, they can secure a market worth £10,000,000 a year.

This is the present value of Danish imports from Germany, and the bulk of this business is to be had by England for the taking.

The recent expulsion of unoffending Danish subjects from Schleswig-Holstein has so stirred the patriotism of the Danes that, rather than buy anything German, they are gladly paying more for the goods of other countries.

Merchants and shopkeepers here are anxious and willing to do business with English firms, but complain that the latter are not ready to meet them halfway by adapting themselves to Danish requirements. This is the old, old story of blind conservatism.

The present chance is one that comes once in a generation. British merchants have but to seize it boldly, and the victory is theirs. But they must strike while the iron is hot.

Germany Losing Danish Trade.—The following, bearing date of January 12, 1899, has been received from Consul Halstead, of Birmingham:

Referring to my report of January 10, containing a clipping from the London Daily Mail, the subject of which was "Trade

* See CONSULAR REPORTS No. 220 (January, 1899), p. 103.

possibilities in Denmark," I inclose from to-day's London Mail a special telegram which it has received from Copenhagen:

LOSS IN A TRADE WAR WITH DENMARK.

In well-informed commercial circles it is reported that, in consequence of the expulsion of Danish subjects in Sönderjylland by Germany, trade with that country during the past few months shows a falling off of £1,500,000 to £2,000,000 compared with the previous year. One insignificant article—horseshoes—for example, formerly imported here from Germany, amounts to £50,000 less, and it is now being imported from Norway. Norwegian, and to some extent Swedish, merchants have joined in the economical war.

American Steel Rails in Denmark.—Vice and Deputy Consul Blom writes from Copenhagen, January 9, 1899:

From conversations I have had recently with importers of rails, I am of the opinion that American-manufactured steel rails can compete in quality and price with those hitherto imported into Denmark from Germany and Great Britain. The railroads in Denmark require rails weighing 45 and 75 pounds per yard, and they use spikes, bolts, and fish plates; not the so-called "chairs." The Danish State railroads are 1,752 kilometers (1,089 English miles) and the private railroads 642 kilometers (399 English miles) in length. Several new roads have been projected, and will be built in the near future. The locomotives are all imported from Germany, but I understand that it is contemplated to send some orders for American locomotives. Manufacturers should correspond with H. C. Petersen & Co., Industribyguing, Copenhagen.

Belgian Enterprise in Russia.—Under date of January 2, 1899, Consul Roosevelt, of Brussels, says:

Belgian capitalists are turning their attention to the sugar industry. A company, lately formed at Brussels, has sent an engineer to Kharkof, Russia, to select land suitable for beet-root cultivation and the establishment of a sugar refinery. The intentions of the company are considerable, as they desire to acquire 1,000 hectares (2,474 acres) of land. As soon as an examination of the soil is finished and they receive authority to buy, the company will organize a society and issue bonds.

Five Belgian engineers sent out by Belgian capitalists have also visited the same locality for the purpose of selecting ground for the construction of rolling mills and other factories.

It is also reported that Belgian capitalists contemplate establishing important glass works (goblets, etc.) near Kharkof.

Labor-Saving Devices in China.—In reply to an export association in New York, Consul-General Goodnow, of Shanghai, writes as follows under date of November 3, 1898:

I can not give you any encouragement in regard to the shipment of wheelbarrows, scrapers, dump cars, and the like to China. The wheelbarrow used here has one large wheel in the middle and a seat on either side, where passengers or loads are carried. Once in a great while, dirt is carried in baskets on such a barrow; but ordinarily it is carried by a coolie in two baskets hung on the end of a bamboo rod balanced on his shoulders. These baskets are about the size and shape of a grain scoop. Labor-saving devices are not in demand in China. The cheapest thing here is a man. There is more labor than can find employment. A coolie carrying dirt will receive from 7 to 10 cents gold per day. He must work from sunrise to sunset—not very steadily or very intensely, but putting in a great many hours and accomplishing a large amount of work for the amount of wages paid. There are more coolies willing to work for this pittance than there is work for them to do.

Consumption of Meat in Tokyo.—Under date of Yokohama, November 28, 1898, Consul-General Govey sends a clipping from the Japan Times of November 27 containing statistics relative to the consumption of butchers' meat in Tokyo, as follows:

The demand for butchers' meat in Tokyo is daily increasing. Beef commands the largest proportion of customers; next comes pork, and then horse flesh. Five or six years ago, the demand for horse flesh was very insignificant; but at present 600 horses, on an average, are slaughtered monthly, and the consumption of this meat far exceeds that of pork. Mutton also would promise a better demand were it not for the difficulties attending successful sheep raising. The number of cattle, swine, horses, and sheep butchered for meat last year aggregated 27,545 head, a total which may be subdivided as follows:

	Head.
Cattle	16, 694
Swine	5, 784
Horses	5, 066
Sheep	1
Total	27, 545

Besides this, we must take into account the cattle imported from abroad, which amounted to 74 head, or to 29,039 kin (38,718 pounds) in weight, and swine to 218 head, or 32,356 kin (43,141 pounds) in weight. If the latest returns for this year be compared with those for last year, it will be found that last year, in September and October, respectively, were slaughtered 2,234 head and 2,913 head, while this year, in the same months, 1,488 head and 3,260 head were killed; showing an increase for September of 254 and October of 347 head altogether.

Increase in Canadian Bank Clearings.—Consul Brush writes from Clifton, January 12, 1899:

Convincing evidence of Canada's prosperity in 1898 is found in the total bank clearings for the different cities.

The clearings in all Canada for the year reached the total of \$1,390,019,344, against \$1,174,710,345 in 1897; an increase of \$215,000,000—by far the largest in the history of the country.

The total clearings for the past twelve months are given in detail, as follows:

Clearing houses.	1898.	1897.
Montreal.....	\$731,264,677	\$601,185,000
Toronto.....	439,489,336	361,756,953
Winnipeg.....	90,754,276	84,435,832
Halifax.....	62,523,827	63,513,838
Hamilton.....	35,637,964	33,350,542
St. John, New Brunswick.....	30,349,264	30,468,180
Total.....	1,390,019,344	1,174,710,345

The gains in Montreal and Toronto are especially noticeable. The cities of Vancouver and Victoria are not included, because comparisons for last year are incomplete.

Shipments of Wood Pulp to the United States.—Consul Ledoux, of Three Rivers, writes as follows to a New York correspondent, January 5, 1899:

The export of wood pulp from Canada to the United States during the last five years has been as follows:

Year.	Pulp wood.	Wood pulp.
1894.....	\$369,010	\$368,875
1895.....	458,613	336,385
1896.....	600,285	557,085
1897.....	677,221	576,720
1898.....	876,690	534,807
Total.....	2,981,819	2,373,872

Canada Fifth in Gold Production.—The following, dated January 12, 1899, has been received from Consul Brush, of Clifton:

The output of gold from the Klondike and British Columbia has raised Canada to the fifth place in the list of gold-producing countries. While the United States shows an increased output for 1898,

it is still second to the Transvaal. The five leading gold-producing countries for 1898, according to figures recently published, are:

Transvaal	\$73, 476, 600
United States.....	64, 300, 000
Australia.....	61, 480, 763
Russia.....	25, 136, 994
Canada.....	14, 190, 000

The Stave Trade in France.—In reply to inquiries from a Philadelphia editor* in regard to the stave trade of France, Consul Britain, of Nantes, under date of November 28, says:

By the reciprocal treaty negotiated between the Governments of the United States and France on the 30th of last May, the duty on staves was reduced from 10 francs per 100 kilograms (\$1.93 per 220 pounds) to 75 centimes per 100 kilograms (15 cents for each 220 pounds). In consequence of this reduction of the duty, I would suggest this as an opportune time to extend the stave trade. Owing to the extreme dry weather here during the months of July, August, and September, the amount of wine produced was comparatively small; but the next season may be an exceptionally good one throughout France and Algeria.

Proposed Steamship Service to Singapore.—Consul-General Pratt writes from Singapore, December 9, 1898:

The telegraphic announcement that the President had recommended the establishment of regular and frequent steamship communication with the new possessions of the United States has met with most favorable reception here. The trade between the Philippines and Singapore and between the latter and the United States is of importance, and this, I think, could be greatly facilitated and increased by the very plan which the President recommends. Since the chartered steamers which for the last few years have been running between New York, this port, and those of China and Japan have done so well, I can but believe that regular American-owned lines, and in particular one plying between New York, Singapore, and Manila, with a smaller corresponding line between here and lesser Philippine ports, would do far better still.

New Central American Steamship Service.—Under date of November 26, 1898, Minister Dudley, of Lima, writes of the inauguration of the service between Valparaiso, Panama, and Central American ports.† The Pacific Steam Navigation Company (British)

* To whom the consul's letter has been sent.

† See CONSULAR REPORTS No. 213 (June, 1898), p. 218.

and the Compania Sud Americana de Vapores (Chilean) will extend their voyages, on a joint schedule, as far north as Ocos, Guatemala, and, if the prospect be encouraging, to ports in the Gulf of California and San Francisco.

Consul-General Gudger, of Panama, sends a report, under date of December 21, 1898, covering the same information, and adds that the first steamer was dispatched on the 17th of December. Boats will run every ten days.

Tariff on Liquors and Crockery in Salvador.—Under date of December 11, 1898, Vice-Consul Baruch sends from San Salvador translation of a decree modifying the tariff on certain articles, as follows:

Crockery in pieces for domestic use and in other forms not mentioned (it being understood by "crockery" that which is not transparent),	Pesos.	Cents.
per kilogram (2.2046 pounds).....	0.08=	3.3
Porcelain in pieces for domestic service and in other forms not mentioned (it being understood by "porcelain" that which is transparent).....	per kilogram....	.12= 5
Liquors, strong or sweet, up to 50 centigrades of alcoholic strength, in packages of less than 1 liter (1.0567 quarts).....	per kilogram....	1.00=41.9
The same, in packages of more than 1 liter.....	do.....	2.00=83.8

Liquors whose alcoholic strength exceeds that which is designated by law will pay 6 cents (2.5 cents) for each following grade.

Increase in Brazilian Tariff.—Consul-General Seeger, of Rio de Janeiro, writes, under date of December 24, 1898:

As predicted in my report* of October 5, 1898, the Congress of the United States of Brazil has promulgated a law ordaining that on and after January 1, 1899, 10 per cent of the duties on goods imported into Brazil shall be paid in gold, which, at the present rate of exchange, is equivalent to an increase of the tariff rates of 23 per cent.

The Brazilian tariff will soon undergo its annual revision, which, according to the experience of the last eight years, means an increase in duties on all merchandise which may be made to yield more revenue.

Venezuelan Customs Decisions.—The Department has received reports from Consul Plumacher, of Maracaibo, dated December 14 and 16, 1898, to the effect that, according to recent treasury decrees, sheeted-tin paper, used to line trunks, are to be placed under

* See CONSULAR REPORTS No. 220 (January, 1899), p. 141.

class 3 of the tariff. Porcelain water-closets, without rubber tubing and metal connections, are to be included in class 3; with tubing, etc., under class 4.

Class 3 of the Venezuelan tariff imposes a duty of 25 centimes (4.8 cents); and class 4, 75 centimes (14.4 cents).

Telegraph Service in Venezuela.—Consul Plumacher sends from Maracaibo, under date of December 20, 1898, translation of a decree recently issued by the President, ordering that the Island of Margarita shall be provided with cable communication with other parts of the Republic.

On December 16, Mr. Plumacher informs the Department that the Secretary of the Postal and Telegraph Department of Venezuela has ordered that new postal and telegraph maps are to be made, as those now in existence do not show sufficient details.

The "Life Plant" of Guadeloupe.—Consul Aymé, of Guadeloupe, has sent with a report* dated December 24, 1898, some leaves of a plant growing wild on the island which he calls the "life plant," on account of its peculiar properties. Mr. Aymé says:

If any leaf be broken from the plant and pinned by the stem to the wall of a warm room, each of the angles between the undulations of the leaf margin soon throws out a number of very white thread-like roots. Next, a tiny plant begins to sprout, which in the course of two or three weeks attains a height of 2 or more inches. When the original leaf begins to shrivel, which may take from six weeks to three months, the small plants may be cut out with scissors and planted or the whole leaf buried, when the young plants will rapidly attain full size. When cultivated, the plant attains a height of 4 feet and produces graceful red and yellow flowers.

I believe that this plant could be successfully grown as a house plant, and certainly in any ordinary greenhouse. I find that old and new leaves sprout with about the same readiness.

United States Coal in Argentina.—Consul Mayer, of Buenos Ayres, writes, on December 27, 1898:

It affords me great pleasure to report that for the first time American coal has arrived here in sailing vessels. The American schooners *Mary E. Palmer* and *William B. Palmer*, captains W. H. Haskell and

*The full text of the report, with inclosures, has been sent to the Department of Agriculture.

L. McDonald, arrived here from Norfolk, Va., with 4,851 tons of Pocahontas coal. They made the trip in forty-nine days. Both left Norfolk on the same day and, strange as it may seem, both arrived at this port on the same day. This is a new era for American shipping, and it will not be long until Argentina will receive her entire coal supply from the United States.

American Trade with New South Wales.—Consul Goding, of Newcastle, under date of November 24, 1898, refers to the recent visit to that city of a member of a Philadelphia firm, with the object of extending trade relations. Mr. Goding adds that his own efforts to increase the commerce between the two countries have met with some success. The people, he says, are awakening to the fact that they can purchase a better grade of goods from the United States at less price than they can purchase from England. Business men have expressed their willingness to cooperate with the consul in his attempts to bring about closer business relations between the United States and New South Wales.

Introduction of American Goods into Italy.—The advice often given by consular officers as to the best means of introducing American goods abroad has been repeated by Consul Hayden, of Castellamare di Stabia. He writes, under date of December 29, 1898, that if American manufacturers and exporters wish to succeed in the Italian market, catalogues should be printed in the Italian language and Italian weights and measures should be employed; and that commercial travelers who represent American firms should themselves be Americans, but should be able to speak the language of the country.

American Railroad Bonds in Germany.—Consul Brodowski sends from Solingen, November 29, 1898, translation of a clipping from the *Internationale Volkswirt*, of Berlin (a paper considered an authority in all matters pertaining to national economy), in regard to the future of American railroad values. Since 1893, says the consul, these bonds have not enjoyed a good reputation in Germany; but public opinion has been gradually changing. The article in question, which exhaustively reviews the situation of American railways, may be considered a rehabilitation of the stock.

Hoes and Picks in South Africa.—Consul-General Stowe sends the following from Cape Town, under date of November 16, 1898:

I wish to call attention to the imports of Kaffir hoes and picks into South Africa, and to suggest that the United States ought to have a larger share of this trade. In 1897, the United Kingdom imported to the value of £5,252 (\$25,558.85) and the United States £71 (\$315.52). The cotton hoe used in the United States is similar, and manufacturers should ask for samples of the Kaffir hoes and picks. The duty is 12 cents each.

Electric Road in Breslau.—Consul Erdman writes from Breslau, January 9, 1899:

I wish to inform our manufacturers of and dealers in street-car rails, electric motors, wire and electric supplies that the street-car company of this city, which has been using horsepower, has been granted the privilege by the city authorities to employ electric motive power at the expiration of its present charter, which will be in 1902.

Oranges and Lemons in Syria.—Consul Merrill writes from Jerusalem, under date of November 24, 1898, that 278,000 boxes of oranges were sent during the last season (from October to April) to England, 40,000 boxes to Austria, and 20,000 boxes to Russia; total for the season, 338,000 boxes. The average price per box is \$1.25, and each box contains 150 to 160 oranges. During the present season, there have been shipped 62,000 boxes. This year's crop is 25 per cent shorter than that of last year. The export of lemons is never large, amounting annually to from 2,000 to 3,000 boxes. The area of orange plantations is yearly increasing.

The full text of Mr. Merrill's report has been sent to the Department of Agriculture.

Coloring and Coating Coffee in Belgium.—The following, dated Brussels, December 16, 1898, has been received from Consul Roosevelt:

I have to report that article 3 of the royal decree of September 28, 1891, relative to the traffic in coffee, has been completed as follows:

Will be tolerated, the coloration of coffee by aid of inoffensive matter, as well as the coating of coffee with alimentary fatty matter or with sugar, only on condition that the proportion of foreign substance added shall not exceed 1 per cent of the total weight of the coffee.

Coffee prepared with inoffensive matter other than coloring, alimentary fatty

matter, and sugar, as, for example, gum lac, may be sold, exposed for sale, held, or transported for sale or delivery when bearing a label indicating in plain characters the nature of the added substance, as, per example, café laqué (coffee gum lac).

Coating with hydrocarbides (vaseline, paraffin, etc.) is declared injurious to health and is consequently prohibited.

Food for Stabled Cows.—Consul Covert, of Lyons, under date of December 24, 1898, sends translation of a report recently made to the Agricultural Department of France on the treatment of stabled cows. The report says that, in order to obtain a quantity of milk, the cows should be given the maximum of food, especially of a liquid nature, and should not be driven fast when they have not been fed. The cows should be forced to eat as much as possible, certain seasoning being used to arouse their appetites; molasses is recommended. Drinks should be tepid. Experiments as to the influence of the temperature of drinks show a variation of a cow's milk of 3 pounds per day. The full text of the report has been sent to the Department of Agriculture.

Potato Crop of Malta.—Consul Grout writes from Valletta, December 6, 1898, that from present indications the potato crop of Malta will be a failure this year. A fungus has attacked the plants, and the result will be destitution among the farmers. Malta does not produce enough vegetables to supply the naval and military forces stationed there, and a dearth in home production means an increase in imports. The full text of Mr. Grout's report has been sent to the Department of Agriculture.

Mortgages and Taxation in Sweden.—Consul-General Winslow, of Stockholm, on December 23, 1898, says:

I present the following figures regarding the value of the existing mortgages on real estate in Sweden, and also the taxation value placed on property by the assessors:

Value of outstanding mortgages on farms.....	\$266, 000, 000
Value of outstanding mortgages on cities and lands not used for farming purposes.....	179, 000, 000
Assessed valuation of farm lands and properties fit to be used as such..	661, 304, 000
Assessed valuation of city and residence property.....	331, 418, 000

These figures show that 40 per cent of the assessed value of farm lands is mortgaged and 54 per cent of city property. In the whole Kingdom, it appears from these figures, 44 per cent of the assessed real estate is mortgaged.

Beer in Munich.—Consul Pierié writes from Munich, December 12, 1898:

The manufacture of beer continues to increase rapidly at Munich year by year. The twenty-five breweries located here during the last six months of 1897 and the first six months of 1898, ending July 1, 1898, turned out 1,999,558 barrels of beer, containing 71,095,395 gallons. About 25,000,000 gallons are shipped yearly to different points in Germany and foreign countries; the balance is consumed in Munich.

Labor in Belfast.—Consul Touvelle writes from Belfast, under date of November 22, 1898, that the shipbuilding and engineering societies have 2 per cent of their membership unemployed; the linen trades have 3.5 per cent unemployed; the building trades, 3.6 per cent; the furnishing and wood-working trades, 5 per cent; printing and allied trades, 7.2 per cent. Business is quiet in clothing trades. The full text of Mr. Touvelle's report has been transmitted to the Department of Labor.

Woman Suffrage in France.—Commercial Agent Atwell, under date of Roubaix, November 26, 1898, says that for the first time in that country, women paying a tax on the profession or trade in which they are engaged will be granted the right to vote. Judges of a class which considers commercial matters are to be elected during December, and women will be allowed to vote for them. In Roubaix, although there are several hundred women entitled to suffrage, adds Mr. Atwell, it is a remarkable fact that not one has yet inscribed herself. The women of Turcoing, an adjoining town, seem to be more progressive, as twenty have already complied with the necessary formalities. It is stated that French women, as a rule, are not enthusiastic concerning the right of suffrage.

Blockade of Crete Raised.—Mr. Henry White, chargé d'affaires ad interim at London, sends, under date of December 23, 1898, copy of a note received from the Foreign Office, with extracts from the London Gazette of December 15, announcing that the admirals in command of the British, French, Italian, and Russian naval forces in Cretan waters have issued a notification to the effect that the blockade of the island was raised on December 5, but that the importation of arms and munitions of war into Crete is absolutely prohibited.

Floods in China.—Consul Fowler, of Chefoo, under date of November 29, 1898, writes in regard to the floods of the Yellow River. One million people, it is stated, are in distress, and Li Hung Chang has been deputed to devise some method to repair the damage to the embankments. It is understood that he has sent abroad for experts. Consul Fowler thinks that engineers in the United States could no doubt build a system of jetties that would prevent a recurrence of these disasters.

Practical Results of Consular Reports.—The Bureau of Foreign Commerce has received the following from the Financial and Securities Corporation, dated Philadelphia, January 17, 1899:

It may be gratifying to you to know that the daily reports which you have sent to us have induced us to charter a fine new vessel, which we are now loading to send abroad, developing an entirely new trade for the United States.

The special business of the corporation is in coal and iron.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
F. D. Chester, Budapest.....	Nov. 18, 1898	Education in Hungary.....	Commissioner of Education.
E. Schneegans, Saigon.....	Nov. 22, 1898	Rice market.....	Department of Agriculture.
Do	Dec. 6, 1898	.....do	Do.
W. Schumann, Mainz.....	Jan. 13, 1899	Vital statistics.....	Marine-Hospital Service.
R. Fleming, Edinburgh.....	Oct. 17, 1898	Crops and live stock in Scotland.	Department of Agriculture.
Do .....	.....do	Agricultural experiments....	Do.

FOREIGN REPORTS AND PUBLICATIONS.

Petroleum as Fuel on Vessels in the East.—A letter to the *Moniteur Officiel du Commerce*, from Ismailia, Egypt, says:

A London firm has demanded from the Suez Canal Company authority to install on its lands at Port Said and Port Thewfik four reservoirs for petroleum, of 5,000 tons each. The plans for the work are finished and the engineer already at Port Thewfik. The same firm has obtained a grant of land at Borneo, of 200 miles, containing immense deposits of petroleum—sufficient to supply vessels going to the Far East for many years. Eleven reservoir depots have been established between Borneo and Suez. Two vessels with cargoes of petroleum have already passed through the canal and will act as transport tanks to supply the reservoirs. As soon as the reservoirs at Suez are finished, the coal supplies of Aden, Périn, Bombay, Colombo, etc., will be practically useless.

From an economical point of view, there is no doubt that petroleum as fuel has great advantages over coal. It is estimated that a ton of petroleum, or the residue of petroleum, is equal to 3 tons of coal, a clear saving on the price of the fuel, admitting that a ton of petroleum costs as much as a ton of coal, which is hardly probable. A further advantage will be the economy of space gained in the storage magazines. So far, a kind of blackish residue from the refineries of Batum, which had no previous value, has been used. It is proposed to utilize this residue as well as the oil taken from the wells at Borneo, which is much inferior in quality to that of Europe.

The use of this fuel is certain to become more and more general. It appears that modifications of comparatively little expense will enable engines using coal to use petroleum; while the shipment of this fuel will be the simplest thing in the world. Vessels will be moored to docks provided with pipes connecting with the reservoirs; and, once these are put in communication with the ship's tanks, there only remains the turning of a faucet and the loading will be quickly done. Already, the boats of the Russian volunteer fleet are constructed so as to burn with equal facility petroleum or coal. Should this system of heating be applied to navigation generally, the coal-mining industries will receive a severe blow.

Cocoa Planting in Samoa.—According to a British Foreign Office report (quoted in the *Board of Trade Journal* for January, 1899), it appears that a potential commercial future has at length arisen for the Samoan group, after years of depression, owing to the fall in price of copra and the apparent unsuitability of the climate for other cultivations, such as rice, sugar, tea, or cotton.

Small capitalists (\$2,500 to \$10,000) going to Samoa and purchasing or leasing land for the purpose of cocoa planting would stand a good chance of making a fair income after the first three or four

years, provided they possess a practical knowledge of tropical planting or will take advice from those in Samoa who have experience in the matter. The number of small plantations is rapidly increasing, and it is estimated that 75 acres are now planted with cocoa trees. The tree is robust and hardy, growing luxuriantly in Samoa and yielding abundant crops after trifling cultivation. The quality is considered good, the price varying, according to reports from Hamburg, San Francisco, and Sydney, between \$290 and \$390 per ton. A small plantation of 6 acres holds about 1,200 trees, and these in the third year produce some 140,000 pods; and it is apparent that, even with the liberal allowance of 15 pods to the pound of marketable bean, each tree would produce from 6 to 8 pounds of prepared cacao bean per annum. The trees are in full yield after the fifth year, and there is apparently no age limit to their bearing.

The cost of land near Apia, continues the British consul, is from \$7 to \$14 per acre if purchased from whites, and from \$1 to \$2 per acre if leased from the natives on a twenty or forty years' lease. The soil is rocky and volcanic. Although labor in large masses is practically unobtainable and the native Samoan is by no means energetic, sufficient floating labor for small plantations is to be had. The price is from \$6 to \$8 per month for a laborer, his food costing about \$4 per month. One man ought to look after 6 acres of well-grown cocoa in the dry season, but two are required during the wet season—from December to May.

The French-Italian Commercial Treaty.—The *Revue du Commerce Extérieur*, Paris, December 17, 1898, says:

The Government has submitted to the Chamber of Deputies a project of law to approve the commercial treaty concluded between France and Italy. The negotiations date back to May 6, 1897. The Italian ambassador at Paris proposed the reestablishment of commercial relations under the most-favored-nation arrangement. Italy would thus benefit by the minimum tariff, France by the conventional tariffs granted in Italy to German, Austro-Hungarian, and Swiss productions, etc. Our Minister of Foreign Affairs accepted, but on condition that Italy should modify her duties on articles presenting a special interest for our export trade with Italy. The terms of the treaty were settled in December, 1898. If accepted by the parliaments of the two countries, it goes into immediate effect. Italian productions imported into France, silk and manufactures of silk excepted, will be then assimilated to those of other European countries. Instead of the duties of the general tariff, applicable to Italian productions since February 1, 1892, these productions will now be subject to the minimum tariff. Goods of French origin, subject to the general Italian tariff since January 1, 1890, will benefit by the reductions of duty granted to the productions of countries which have concluded treaties of commerce with Italy. In addition, the new treaty stipulates other favors for French exports. For example, wine in bottles is taxed \$3.86, instead of \$11.58, per hundred; cognac,

\$11.58 instead of \$17.37. Other reductions of duties vary between 4 per cent and 33 per cent. Some special provisions have been made to lessen the abuses of the Italian customs valuation of mixed goods, such as tissues of wool and cotton and mixtures of silk. If Germany and other countries have not yet established their position to our detriment in the Italian markets, our exporters will now have to compete with native industries, which have become more formidable under a judicious protective tariff. On the other hand, Italian commerce will find a similar situation in France. The duties are higher than in 1877, and cattle breeding and the cultivation of the vine are in a better condition to resist Italian competition. The harm done by a tariff war is never completely repaired.

Exposition of Automobiles in Berlin.—The *Moniteur Officiel du Commerce*, Paris, December 1, 1898, announces that an international exposition of automatic vehicles will be held in Berlin in the month of May, 1899. This exposition will admit automobiles of every kind, moto-cycles, moto-carriages, motors, and accumulators with their accessories.

German Bicycle Exports.—The *Moniteur Officiel du Commerce*, Paris, December 22, 1898, says that, according to official statistics, the exports of German bicycles for the first nine months of 1898 amounted to 12,650,000 marks (\$3,010,700). The same exports for the corresponding period in 1897 were 8,800,000 marks (\$2,094,400). It is estimated, continues the article, that the exportation of German bicycles exceeds the importations by about 50 per cent. From this, it would appear that the demands for an increase of the present tariff to benefit German manufactures are not well grounded.

Bicycles and Automobiles in Sweden.—An article in the *Moniteur Officiel du Commerce*, Paris, December 8, 1898, is summarized as follows:

The importation of bicycles into Sweden in five years has been:

Year.	Value.	
	Crowns.	
1891	82,816	\$22,195
1894	844,756	226,395
1895	874,756	234,435
1896	1,337,274	358,389
1897	2,361,403	632,856

This growth was in spite of the rapid development of the home industry. Official statistics for the year 1897 give the following countries of production:

Country.	Value.	
	<i>Crowns.</i>	
Germany.....	897,481	\$240,525
England.....	774,509	207,568
Denmark.....	661,726	177,343
France.....	4,235	1,135
United States.....	84	22

The above figures do not, however, fairly represent the state of trade, as the United States could justly claim two-thirds of the Danish and English, as also a good part of the German, importation. Machines accredited to these three countries are, for the most part, American machines in transit. This is shown by the fact that one large American factory alone sends several thousand machines to Sweden. Germany, after the United States, sells the largest number of machines in this market. The chainless machines, with adjustable gear, will quickly become popular in this country, especially if made to be sold at medium prices and with interchangeable and easily adjusted pieces. This last condition is indispensable.

The introduction of automobile vehicles is a question of the future. One has already made its appearance in Stockholm. Heavy and expensive models will not succeed. A strong machine of average dimensions and velocity, one capable of ascending a rather steep grade, is needed. The cheapness of petroleum will contribute to popularize these vehicles. Some mechanical protection against dust will be indispensable, on account of the generally bad condition of the Swedish roads.

Glasgow Exhibition of 1901.—The Department has received the prospectus of the international exhibition which it is intended to hold in Glasgow in the summer of 1901. The exhibition is to be on the same site as that of 1888, and it is intended to present an illustration of the produce and manufactures of the British Empire and colonies, with adequate representation from other countries. The exhibition will be divided into sections, among which the following will receive attention: Fine art, history and archæology, locomotion and transport, electricity, labor-saving machinery, marine engineering, and sports. The River Kelvin will be available for the exhibition of naval shipbuilding and life-saving apparatus. The charge for space within the building will be 3s. (73 cents) per square foot, with a minimum charge of £5 (\$24.30). Payment to the extent of 25 per cent must accompany the application.

Consumption of Horse Meat in Paris.—The Consular Journal and Greater Britain (London, January 26, 1899) says that, according to statistics published by the French Ministry of Agriculture, the consumption of the flesh of horses, mules, and donkeys is steadily

increasing in Paris. The number of stalls at which it is offered now reaches 193. The number of horses brought to the shambles in the last year was 21,667; of mules, 52; and of donkeys, 310; but 734 horses, 1 mule, and 7 donkeys were condemned as unfit for human food. The prime cuts brought about 1 franc (19.3 cents) a pound, some of the inferior parts bringing little more than 10 centimes (2 cents) per pound.

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Full directions for binding the Consular Reports are given in No.
131, page 663.

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston makes the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to \$20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to January 1, 1899, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account that the ruble of Russia, for instance, fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891-95 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S.gold.	Coins.
Argentine Republic*.	Gold and silver..	Peso.....	\$0.96,5	Gold—Argentine (\$4.82,4) and ¼ Argentine; silver—peso and divisions.
Austria-Hungary†.....	Gold	Crown.....	.20,3	Gold—20 crowns (\$4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	.....do	Dollar.....	1.00	
British Honduras.....	.....do .....	.....do	1.00	
Chile .....	.....do	Peso.....	.36,5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	.....do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.
Cuba	Gold and silver..	.....do .....	.92,6	Gold—doubloon (\$5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	.....do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	.....do	Mark.....	.19,3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	.....do	Pound sterling..	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti .....	.....do	Gourde.....	.96,5	Silver—gourde.
Italy.....	.....do	Lira .....	.19,3	Gold—5, 10, 20, 50, and 100 lire silver—5 lire.
Japan ‡	Gold.....	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia .....	.....do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin.....	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—\$2 (\$2.02,7).
Portugal.....	.....do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia.....	.....do	Ruble.....	.51,5	Gold—imperial (\$7.718) and ½ imperial (\$3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Gold	Peso.....	1.03,4	Gold—peso: silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed.

† The gold standard was adopted October 1, 1892. (See CONSULAR REPORTS No. 147, p. 623.) Values are still, however, frequently expressed in the florin or gulden, which is worth 2 crowns or 40.6 cents.

‡ Gold standard adopted October 1, 1897. (See CONSULAR REPORTS No. 201, p. 259.)

§ See note to table of fluctuating currencies.

¶ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—Countries with fluctuating currencies, 1874-1890.

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*.	Silver.....	Florin.....	\$0.47,6	\$0.45,3	\$0.45,3	\$0.41,3	\$0.40,1	\$0.39,8
Bolivia.....	do.....	Dollar until 1890; bolivi- ano there- after.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America.....	do.....	Peso.....	.96,5	.91,8	.91,8	.83,6		
China.....	Silver.....	Haikwan tael.	1.61	1.61				
Colombia.....	do.....	Peso.....	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador.....	do.....	do.....	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†.....	Gold.....	Pound (100 piasters).			4.97,4	4.97,4	4.90	4.90
India.....	Silver.....	Rupee.....	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan.....	Gold.....	Yen.....	.99,7	.99,7	.99,7	.99,7		
	Silver.....						.87,6	.86,9
Mexico.....	do.....	Dollar.....	1.04,7½	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands‡.....	Gold and Silver.	Florin.....	.40,5	.38,5	.38,5	.40,2		
Peru.....	Silver.....	Sol.....	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia.....	do.....	Ruble.....	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli.....	do.....	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*.	Silver.....	Florin.....	\$0.39,3	\$0.37,1	\$0.35,9	\$0.34,5	\$0.33,6	\$0.42
Bolivia.....	do.....	Dollar until 1880; bolivi- ano there- after.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America.....	do.....	Peso.....				.69,9	.68	.85
Colombia.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†.....	Gold.....	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India.....	Silver.....	Rupee.....	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan.....	Gold.....	Yen.....			.99,7	.99,7	.99,7	.99,7
	Silver.....		.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico.....	do.....	Dollar.....	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru.....	Silver.....	Sol.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia.....	do.....	Ruble.....	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli.....	do.....	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at \$4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—Quarterly valuations of fluctuating currencies.

Countries.	Monetary unit.	1896.				1897.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.....	\$0.49,1	\$0.49,3	\$0.49,7	\$0.49	\$0.47,4	\$0.46,8	\$0.44,3	\$0.41,2
Central America.	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,5	.44,3	.41,2
China.....	Amoy tael.....				.79,3	.76,7	.75,7	.71,7	.66,4
	Canton tael.....				.79	.76,5	.75,5	.71,5	.66,4
	Chefoo tael.....	.75,9	.76,3	.76,9	.75,8	.73,3	.72,4	.68,6	.63,7
	Chinkiang tael.....				.77,4	.74,9	.73,9	.70	.65,1
	Fuchau tael.....				.73,3	.70,9	.70	.66,3	.61,6
	Haikwan tael....	.80,8	.81,2	.81,9	.80,6	.78	.77	.73,1	.67,8
	Hankau tael.....				.74,2	.71,7	.70,8	.67,1	.62,3
	Ningpo tael.....				.76,2	.73,7	.72,8	.68,9	.64
	Niuchwang tael.				.74,3	.71,9	.71	.67,2	.62,5
	Shanghai tael....	.72,5	.72,9	.73,5	.72,4	.70	.69,1	.65,5	.60,8
	Swatow tael.....				.73,2	.70,8	.69,9	.66,2	.61,5
	Takao tael.....				.79,8	.77,2	.76,2	.72,2	.67
	Tientsin tael....	.76,9	.77,3	.78	.76,8	.74,3	.73,4	.69,5	.64,6
Colombia.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Ecuador.....	do.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
India.....	Silver rupee.....	.23,3	.23,4	.23,6	.23,3	.22,5	.22,2	.21,1	.19,6
Japan.....	Silver yen.....	.52,9	.53,2	.53,2	.52,8	.51,1	.50,5		
Mexico.....	Silver dollar.....	.53,3	.53,6	.54	.53,2	.51,5	.50,8	.48,2	.44,6
Persia.....	Silver kran.....	.09	.09,1	.09,2	.09	.08,7	.08,6	.08,2	.07,6
Peru.....	Silver sol.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Russia.....	Silver ruble.....	.39,3	.39,5	.39,8	.39,2	.37,9	.37,4		
Tripoli.....	Silver mahbub.....	.44,3	.44,5	.44,9	.44,2				

Countries.	Monetary unit.	1898.				1899.
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.
Bolivia.....	Silver boliviano.....	\$0.42,4	\$0.40,9	\$0.41,8	\$0.43,6	\$0.43,9
Central America.....	Silver peso.....	.41,4	.40,9	.41,8	.43,6	.43,9
China.....	Amoy tael.....	.68,5	.66,2	.67,6	.70,6	.71
	Canton tael.....	.68,3	.66	.67,4	.70,4	.70,8
	Chefoo tael.....	.65,5	.63,3	.64,6	.67,5	.67,9
	Chinkiang tael..	.66,9	.64,6	.66	.69	.69,3
	Fuchau tael.....	.63,4	.61,2	.62,5	.65,3	.65,6
	Haikwan tael....	.69,7	.67,3	.68,8	.71,8	.72,2
	Hankau tael.....	.64,1	.61,9	.63,2	.66	.66,4
	Ningpo tael.....	.64,3	.63	.65	.67,9	.68,2
	Niuchwang tael.	.65,9	.62	.63,4	.66,2	.66,5
	Shanghai tael....	.62,6	.60,4	.61,7	.64,5	.64,8
	Swatow tael.....	.63,3	.61,1	.62,4	.65,2	.65,5
	Takao tael.....	.66	.66,6	.68	.71	.71,4
	Tientsin tael....	.66,4	.64,1	.65,5	.68,4	.68,8
Colombia.....	Silver peso.....	.42,4	.40,9	.41,8	.43,6	.43,9
Ecuador.....	do.....	.42,4	.40,9	.41,8	.43,6	.43,9
India *.....	Silver rupee.....	.20,1	.19,1	.19,9	.20,7	.20,8
Mexico.....	Silver dollar.....	.46	.44,4	.45,4	.47,4	.47,7
Persia.....	Silver kran.....	.07,8	.07,5	.07,7	.08	.08,1
Peru.....	Silver sol.....	.42,4	.40,9	.41,8	.43,6	.43,9

*The commercial value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal.....	4.422 gallons.
Ardeb.....	Egypt.....	7.6907 bushels.
Are.....	Metric.....	0.02471 acre.
Arrobe.....	Paraguay.....	25 pounds.
Arratel or libra.....	Portugal.....	1.011 pounds.
Arroba (dry).....	Argentine Republic.....	25.3775 pounds.
Do.....	Brazil.....	32.38 pounds.
Do.....	Cuba.....	25.3664 pounds.
Do.....	Portugal.....	32.38 pounds.
Do.....	Spain.....	25.36 pounds.
Do.....	Venezuela.....	25.4024 pounds.
Arroba (liquid).....	Cuba, Spain, and Venezuela.....	4.263 gallons.
Arshine.....	Russia.....	28 inches.
Arshine (square).....	do.....	5.44 square feet.
Artel.....	Morocco.....	1.12 pounds.
Baril.....	Argentine Republic and Mexico.....	20.0787 gallons.
Barrel.....	Malta (customs).....	11.4 gallons.
Do.....	Spain (raisins).....	100 pounds.
Berkovets.....	Russia.....	361.12 pounds.
Bongkal.....	India.....	832 grains.
Bouw.....	Sumatra.....	7,096.5 square meters.
Bu.....	Japan.....	0.1 inch.
Butt (wine).....	Spain.....	140 gallons.
Caffiso.....	Malta.....	5.4 gallons.
Candy.....	India (Bombay).....	529 pounds.
Do.....	India (Madras).....	500 pounds.
Cantar.....	Morocco.....	113 pounds.
Do.....	Syria (Damascus).....	575 pounds.
Do.....	Turkey.....	124.7036 pounds.
Cantaro (cantar).....	Malta.....	175 pounds.
Carga.....	Mexico and Salvador.....	300 pounds.
Catty.....	China.....	1.333½ (1½) pounds.
Do *.....	Japan.....	1.31 pounds.
Do.....	Java, Siam, and Malacca.....	1.35 pounds.
Do.....	Sumatra.....	2.12 pounds.
Centaro.....	Central America.....	4.2631 gallons.
Centner.....	Bremen and Brunswick.....	127.5 pounds.
Do.....	Darmstadt.....	110.24 pounds.
Do.....	Denmark and Norway.....	110.11 pounds.
Do.....	Nuremberg.....	112.43 pounds.
Do.....	Prussia.....	113.44 pounds.
Do.....	Sweden.....	93.7 pounds.
Do.....	Vienna.....	123.5 pounds.
Do.....	Zollverein.....	110.24 pounds.
Do.....	Double or metric.....	220.46 pounds.
Chih.....	China.....	14 inches.

* More frequently called "kin." Among merchants in the treaty ports it equals 1.33½ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan.....	Sarawak.....	3,098 pounds.
Do.....	Siam (Koyan).....	2,667 pounds.
Cuadra.....	Argentine Republic.....	4.2 acres.
Do.....	Paraguay.....	78.9 yards.
Do.....	Paraguay (square).....	8,077 square feet.
Do.....	Uruguay.....	Nearly 2 acres.
Cubic meter.....	Metric.....	35.3 cubic feet.
Cwt. (hundredweight).....	British.....	112 pounds.
Dessiatine.....	Russia.....	2,6997 acres.
Do.....	Spain.....	1,599 bushels.
Drachme.....	Greece.....	Half ounce.
Egyptian weights and measures.....	(See CONSULAR REPORTS No. 144.)	
Fanega (dry).....	Central America.....	1,5745 bushels.
Do.....	Chile.....	2,575 bushels.
Do.....	Cuba.....	1,599 bushels.
Do.....	Mexico.....	1,54728 bushels.
Do.....	Morocco.....	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do.....	Uruguay (double).....	7,776 bushels.
Do.....	Uruguay (single).....	3,888 bushels.
Do.....	Venezuela.....	1,599 bushels.
Fanega (liquid).....	Spain.....	16 gallons.
Feddán.....	Egypt.....	1.03 acres.
Frail (raisins).....	Spain.....	50 pounds.
Frasco.....	Argentine Republic.....	2,5096 quarts.
Do.....	Mexico.....	2.5 quarts.
Fuder.....	Luxemburg.....	264.17 gallons.
Garnice.....	Russian Poland.....	0.88 gallon.
Gram.....	Metric.....	15.432 grains.
Hectare.....	do.....	2,471 acres.
Hectoliter:		
Dry.....	do.....	2.838 bushels.
Liquid.....	do.....	26.417 gallons.
Joch.....	Austria-Hungary.....	1,422 acres.
Ken.....	Japan.....	6 feet.
Kilogram (kilo).....	Metric.....	2,2046 pounds.
Kilometer.....	do.....	0.621376 mile.
Klafter.....	Russia.....	216 cubic feet.
Koku.....	Japan.....	4,9629 bushels.
Korree.....	Russia.....	3.5 bushels.
Last.....	Belgium and Holland.....	85,134 bushels.
Do.....	England (dry malt).....	82.52 bushels.
Do.....	Germany.....	2 metric tons (4,480 pounds).
Do.....	Prussia.....	112.29 bushels.
Do.....	Russian Poland.....	117 bushels.
Do.....	Spain (salt).....	4,760 pounds.
League (land).....	Paraguay.....	4,633 acres.
Li.....	China.....	2,115 feet.
Libra (pound).....	Castilian.....	7,100 grains (troy).
Do.....	Argentine Republic.....	1,0127 pounds.
Do.....	Central America.....	1,043 pounds.
Do.....	Chile.....	1,014 pounds.
Do.....	Cuba.....	1,0161 pounds.
Do.....	Mexico.....	1,01465 pounds.
Do.....	Peru.....	1,0143 pounds.
Do.....	Portugal.....	1,011 pounds.
Do.....	Uruguay.....	1,0143 pounds.
Do.....	Venezuela.....	1,0161 pounds.
Liter.....	Metric.....	1,0567 quarts.
Live (pound).....	Greece.....	1.1 pounds.
Do.....	Guiana.....	1,0791 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Load.....	England (timber).....	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 super- ficial feet.
Manzana.....	Costa Rica.....	1½ acres.
Do.....	Nicaragua and Salvador.....	1.727 acres.
Marc.....	Bolivia.....	0.507 pound.
Maund.....	India.....	82½ pounds.
Meter.....	Metric.....	39.37 inches.
Mil.....	Denmark.....	4.68 miles.
Do.....	Denmark (geographical).....	4.61 miles.
Milla.....	Nicaragua and Honduras.....	1.1403 miles.
Morgen.....	Prussia.....	0.63 acre.
Oke.....	Egypt.....	2.7225 pounds.
Do.....	Greece.....	2.84 pounds.
Do.....	Hungary.....	3.0817 pounds.
Do.....	Turkey.....	2.85418 pounds.
Do.....	Hungary and Wallachia.....	2.5 pints.
Pic.....	Egypt.....	21¼ inches.
Picul.....	Borneo and Celebes.....	135.64 pounds.
Do.....	China, Japan, and Sumatra.....	133½ pounds.
Do.....	Java.....	135.1 pounds.
Do.....	Philippine Islands (hemp).....	139.45 pounds.
Do.....	Philippine Islands (sugar).....	140 pounds.
Pie.....	Argentine Republic.....	0.9478 foot.
Do.....	Castile.....	0.91407 foot.
Pik.....	Turkey.....	27.9 inches.
Pood.....	Russia.....	36.112 pounds.
Pund (pound).....	Denmark and Sweden.....	1.102 pounds.
Quarter.....	Great Britain.....	8.252 bushels.
Do.....	London (coal).....	36 bushels.
Quintal.....	Argentine Republic.....	101.42 pounds.
Do.....	Brazil.....	130.06 pounds.
Do.....	Castile, Chile, Mexico, and Peru.....	101.61 pounds.
Do.....	Greece.....	123.2 pounds.
Do.....	Newfoundland (fish).....	112 pounds.
Do.....	Paraguay.....	100 pounds.
Do.....	Syria.....	125 pounds.
Do.....	Metric.....	220.46 pounds.
Rottle.....	Palestine.....	6 pounds.
Do.....	Syria.....	5¾ pounds.
Sagen.....	Russia.....	7 feet.
Salm.....	Malta.....	490 pounds.
Se.....	Japan.....	0.02451 acres.
Seer.....	India.....	1 pound 13 ounces.
Shaku.....	Japan.....	11.9305 inches.
Sho.....	do.....	1.6 quarts.
Standard (St. Petersburg).....	Lumber measure.....	165 cubic feet.
Stone.....	British.....	14 pounds.
Suerte.....	Uruguay.....	2,700 cuadras (see cua- dra).
Sun.....	Japan.....	1.193 inches.
Tael.....	Cochin China.....	590.75 grains (trov).
Tan.....	Japan.....	0.25 acre.
To.....	do.....	2 pecks.
Ton.....	Space measure.....	40 cubic feet.
Tonde (cereals).....	Denmark.....	3.94783 bushels.
Tondeland.....	do.....	1.36 acres.
Tsubo.....	Japan.....	6 feet square.
Tsun.....	China.....	1.41 inches.
Tunna.....	Sweden.....	4.5 bushels.
Tunnland.....	do.....	1.22 acres.

Foreign weights and measures, with American equivalents—Continued.

Denominations	Where used.	American equivalents.
Vara.....	Argentine Republic.....	34.1208 inches.
Do.....	Castile.....	0.914117 yard.
Do.....	Central America.....	32.87 inches.
Do.....	Chile and Peru.....	33.367 inches.
Do.....	Cuba.....	33.384 inches.
Do.....	Curacao.....	33.375 inches.
Do.....	Mexico.....	33 inches.
Do.....	Paraguay.....	34 inches.
Do.....	Venezuela.....	33.384 inches.
Vedro.....	Russia.....	2.707 gallons.
Vergees.....	Isle of Jersey.....	71.1 square rods.
Verst.....	Russia.....	0.663 mile.
Vlocka.....	Russian Poland.....	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
 Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
 Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
 Gram equals 15.432 grains.
 Decagram (10 grams) equals 0.3527 ounce.
 Hectogram (100 grams) equals 3.5274 ounces.
 Kilogram (1,000 grams) equals 2.2046 pounds.
 Myriagram (10,000 grams) equals 22.046 pounds.
 Quintal (100,000 grams) equals 220.46 pounds.
 Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
 Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
 Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
 Liter equals 0.908 quart.
 Decaliter (10 liters) equals 9.08 quarts.
 Hectoliter (100 liters) equals 2.838 bushels.
 Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
 Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
 Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
 Liter equals 1.0567 quarts.
 Decaliter (10 liters) equals 2.6418 gallons.
 Hectoliter (100 liters) equals 26.418 gallons.
 Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
 Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
 Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
 Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.

Hectometer (100 meters) equals 328 feet 1 inch.

Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).

Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.

Are (100 square meters) equals 119.6 square yards.

Hectare (10,000 square meters) equals 2.471 acres.

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UNITED STATES TRADE AT CHEFOO.

In my report on United States trade with China* is a table showing how the imports of certain lines of American merchandise had increased during the quarter ended September 30, 1897, over same period of the year 1894. In order to keep this most important market before the American merchants, I submit a similar table for the quarter ended September 30, 1898, prepared from the quarterly returns of the customs just to hand.

Table showing the imports of all merchandise which expressly names the country of its origin into the port of Chefoo for the quarter ended September 30, 1898, and for the same period of 1895.

Articles.	1895.	1898.	Decrease.	Increase.
Drills:				
English and Dutch.....pieces...	12,712	3,990	8,722	
American .....do.....	31,440	72,776		41,336
Jeans:				
English .....do.....	3,653	860	2,793	
American .....do.....	1,130	2,615		1,485
Sheetings:				
English .....do.....	16,050	3,500	12,550	
Indian.....do.....	* 7,560	200	7,360	
American .....do.....	75,115	174,575		99,460
Oil, kerosene:				
American .....gallons...	679,700	2,379,020		1,699,320
Russian .....do.....	150,000	39,940	110,060	

* 1896.

A steady decline of all English cottons and the same steady increase in American goods are noticeable.

* See CONSULAR REPORTS No. 210 (March, 1898), p. 344.

The figures for our oil and sheetings are particularly encouraging. The table in the report above referred to shows the increase of our imports over 1894. This table shows that the increases are not abnormal, but, as stated in my former reports, are on a sound basis.

Increase of American imports in September quarters, 1897 and 1898, over 1894.

Articles.	1897 over 1894.	1898 over 1894.
Drills.....pieces...	43,910	47,391
Jeans.....do.....	880	930
Sheetings.....do.....	95,275	138,010
Oil, kerosene.....gallons...	1,456,460	1,902,920

We have no record now of all that which comes in overland, or via Kyao-chau (German), Wei-hai-wei (British), or of the trade in Port Arthur (Russian). The latter port, I have been told, imported in the last ten months American machinery, nails, lumber, and locomotives to the value of \$1,545,000 gold. I have repeatedly dilated upon the importance of American interests in North China, the region now covered by the rival claims of the European powers; and, although those powers claim that they are actuated by trade interests, the bona fide sales of machinery, cottons, flour, lumber, oil, household stores, etc., by the United States in this region are greater in value than those of continental Europe, including, of course, Germany and Russia, both European and Asiatic (this I have substantiated in late reports). We must not lose sight of this point, nor of the fact that our trade is constantly increasing—not slowly, but in an almost phenomenal manner. The figures given herein are not taken to support any preconceived ideas of mine, but to show the facts.

As usual, I have only quoted those classes that state the country of origin; nothing is taken for granted. British merchants tell me that all the shirtings sold here are American; but, as the country of origin is not given, I do not include them in the table above.

My report on the trade of North China,* which was compiled expressly with a view to show our people what interests of theirs were threatened, received such attention by the press at home and abroad that I venture to continue the subject by the subjoined tables.

* See CONSULAR REPORTS No. 215 (August, 1898), p. 575.

Importation of certain classes of merchandise into the three northern ports Tientsin, Niuchwang, and Chefoo for the quarter ended September 30, 1898, and for the same period of 1896.

Articles.	1896.	1898.	Decrease.	Increase.
<i>Niuchwang.</i>				
Drills:				
English.....pieces...	5,140	1,115	4,025	
Dutch.....do.....	2,175		2,175	
American.....do.....	104,924	119,425		14,496
Sheetings:				
English.....do.....	7,895	320	7,575	
Indian.....do.....	7,135	2,050	5,085	
American.....do.....	105,425	155,270		49,845
Oil, kerosene:				
American.....gallons...	111,500	340,000		228,500
Russian.....do.....	*25,000	10,000	15,000	
<i>Tientsin.</i>				
Drills:				
English.....pieces...	10,195		10,195	
Dutch.....do.....	13,725	1,540	12,185	
American.....do.....	173,481	213,860		40,379
Jeans:				
English.....do.....	11,228	12,390		1,162
American.....do.....	12,690	21,900		9,210
Sheetings:				
English.....do.....	28,675	5,020	23,655	
American.....do.....	298,770	313,513		14,743
Oil, kerosene:				
American.....gallons...	687,000	1,257,000		570,000
Russian.....do.....	582,000	338,000	244,000	
<i>Chefoo.</i>				
Drills:				
Dutch.....pieces...	9,675	3,990	5,685	
American.....do.....	56,660	72,776		16,116
Jeans:				
English.....do.....	1,960	860	1,100	
American.....do.....	340	2,615		2,275
Sheetings:				
English.....do.....	21,855	3,500	18,355	
Indian.....do.....	7,560	200	7,360	
American.....do.....	74,365	174,575		100,210
Oil, kerosene:				
American.....gallons...	911,100	2,379,020		1,467,920
Russian.....do.....	†150,000	39,940	110,060	
<i>Résumé.</i>				
Drills:				
American.....pieces...	335,070	406,061		70,991
English and Dutch.....do.....	40,910	6,645	34,265	
Jeans:				
American.....do.....	13,030	24,515		11,485
English.....do.....	13,188	13,250		62
Sheetings:				
American.....do.....	478,560	643,358		164,798
English.....do.....	58,425	8,840	49,585	
Indian.....do.....	14,595	2,250	12,445	
Oil, kerosene:				
American.....gallons...	1,709,600	3,976,020		2,266,420
Russian.....do.....	*1,834,000	387,940	1,446,060	

* 1897.

† 1895.

Table showing proportion of importations of certain American merchandise during quarter ended September 30, 1898, into the three northern ports, compared with the importations for same period in the southern ports.

Ports.	Drills.	Jeans.	Sheetings.	Oil, kerosene.
	<i>Pieces.</i>	<i>Pieces.</i>	<i>Pieces.</i>	<i>Gallons.</i>
Three northern ports.....	406,061	24,515	643,358	3,976,020
Chungking	1,575			1,500
Ichang.....	3,947			
Hankau.....	45,285			1,869,000
Kinkiang	* 3,585			580,400
Wuhu.....	5,675		280	562,200
Chinkiang	23,690		1,500	773,100
Ningpo	10,950	2,040	10,626	185,600
Hangchow.....				480,900
Wenchow.....	795			20,000
Fuchau	3,492			1,200
Amoy.....	* 656			50,000
Swatow.....	83			116,340
Canton	3			71,440
West River ports:				
Wuchow.....				52,485
Samshui				9,000
Kiungchow.....				137,150
Pakhoi.....				19,000
Kowloon (Hongkong).....				1,034,815
Lappa (Macao).....				29,510
Lungchow.....				670
Mengtze.....				2,030
Yatung.....				20
Total for all ports south of Chefoo, except Shanghai.....	99,336	2,040	12,406	5,994,320
Excess taken by northern ports (Tientsin, Niuchwang, and Chefoo).....	306,725	22,475	630,952	
Excess taken by southern ports (27 ports).....				1,978,300

*All kinds.

From the above, I have excluded Shanghai, because that port is the landing port for all the domestics. The exports from that port for the same period were:

Description.	Drills.	Jeans.	Sheetings.
	<i>Pieces.</i>	<i>Pieces.</i>	<i>Pieces.</i>
Reexported from Shanghai to Chinese ports.....	548,180	39,220	774,498
Received by Tientsin, Niuchwang, and Chefoo.....	406,061	24,515	643,338
Balance taken by all rest of China, including that sent inland	142,119	14,705	131,140

Thus the three ports Niuchwang, Tientsin, and Chefoo, in the center of the political activity in the East, are worth more to us as a market than all the other twenty-seven. I do not include kerosene in this comparison, because a great deal of it is imported direct, not

going to Shanghai like the cottons, and I wish to be perfectly fair to the southern ports.

In the report issued by the British Foreign Office, May, 1898, No. 455, Report on Trade Between the United States and China, I find that my reports are quoted in several places. On page 9, it states:

The following comparative return is given by the United States consul at Chefoo, province of Shantung, of the imports of kerosene, American and Russian, through that port in recent years. They may be supposed to represent the consumption of the foreign oil by the province of Shantung in the years named:

Description.	1894.	1895.	1897.
	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>
American.....	476,100		1,932,560
Russian		150,000	125,000

The figures above represent the importations for the quarter ended September 30, 1894, and same periods in 1895 and 1897.

The importations of oil for the quarter ended September 30 of the years 1895-1898 were:

Description.	1895.	1896.	1897.	1898.
	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>
American.....	679,700	911,100	1,932,560	2,379,020
Russian.....	150,000		125,000	39,940
Excess of American over Russian.....	529,700	911,100	1,807,560	2,339,080

The table quoted by the British Foreign Office report, and which was given to show how important our interests are, was for only one quarter. The importations for the entire years were:

Description.	1895.	1896.	1897.	1898.*
	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>
American.....	1,967,900	2,388,250	5,281,060	3,854,795
Russian.....	610,000	243,000	577,800	39,940
Excess of American over Russian.....	1,357,900	2,145,250	4,703,260	3,814,855

* Nine months ended September 30.

The above table shows that the importations for 1897 exceeded by 924,910 gallons the combined importations for 1895 and 1896, and that the importations for the nine months ended September 30 of this year exceeded those for any twelve months previous to 1897, and were 918,995 gallons more than double those for 1895.

The total importations of kerosene oil in 1897 were as follows:

Into—	American.	Russian.	Sumatran.
	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>
All China.....	48,212,505	36,924,825	14,212,278
Niuchwang.....	2,046,000	45,000	.....
Tientsin.....	4,560,500	5,208,380	.....
Chefoo.....	5,281,060	39,940	.....
Total for North China.....	11,887,560	5,293,320	.....
Balance for rest of China.....	36,324,945	31,631,505	14,212,278

The table shows that Chefoo takes the most of the American (of the three northern ports); that those ports took one-fourth of the American and one-seventh of the Russian and no Sumatran; and that nearly all of the Russian oil sold in the north was taken by Tientsin. In fact, Tientsin took more Russian than American oil in 1897, exceeding the importation for 1896 by over 2,000,000 gallons.

We thus see that our best market, not only for oil, but for all our products, is in imminent danger; for no one believes that the Russians will not soon control the markets for the sale of their products—oil, cottons, etc.—in all the territory north of this; and what effect the occupation of Kyao-chau and commercial control of this district by Germany will have upon our interests is a matter of grave concern to us.

Some seven or eight years ago, at the time of the inauguration of the Sumatran oil trade in China, I wrote a full report* upon the situation, and my prognostications are, I am sorry to see, being fulfilled. We have lost ground in South China. Shall we be also driven out of North China?

Much of the decrease is due to the methods by which our trade in China is placed in the hands of aliens. So far as I know, the entire American-oil business in China is represented by non-Americans. My personal observations in this port convince me that we are losing ground on that account.

AMERICAN EXPORTERS AT FAULT.

Another thing that is hurting us is the gross carelessness of some of our exporters in the United States. When preparing my annual report of trade, I visited the stores here and asked if they had any complaints or suggestions relating to American goods. One of the largest importers took me into his receiving wareroom and showed me five cases of cheese that had just been received. Each case held six cheeses, and all were absolutely useless—full of worms, eaten

* Published in CONSULAR REPORTS No. 145 (October, 1892).

out, decomposed, and covered with green mold; only two cases had been opened before I came, so, at my request, the other four were opened in my presence; they were worse, if possible. I said to the merchant, "That is a shame." He said, "Yes, and it is a dead loss to me." He then told me that the same thing had happened many times before; that he had written to the shippers asking for a rebate, but none was given. This merchant was positive that the cheeses were bad when put on board ship at San Francisco, because it would have been impossible for them to get into that condition in five or six weeks. Such goods are supposed to keep good for years.

We then went into another large room, where I saw foreigners (Germans) unpacking cases of canned fish—anchovies. The smell was horrible, for out of 40 or 50 tins I saw the tops off of at least four-fifths and the contents oozing all over the boxes. Each tin was securely placed and had not been removed from the box. The merchant said:

This is the way I am treated, and yet this is part of a \$5,000 order. These goods are from San Francisco [showing me the firm's name]. I buy there because I can get the goods a month quicker than from my country [Germany], and, as you know, time is everything to me. These cheeses were bought to go to Port Arthur [this firm has the contract for provisioning the Russians over there and the Germans at Kyao-chau]. I had to telegraph to Shanghai for cheese. The anchovies were for Kyao-chau, and all are a dead loss.

I went into another large importer's—a British house. Here I was shown tabloids in paper boxes melting with the heat and damp, and the comment was: "Surely Americans ought to know that tabloids being sent to Asia should be put into glass bottles, as the English send theirs." Here I was told that the Eastern firms pack the best, and that some Californian shippers are extremely careless. A bicycle sent to me, when unpacked, was found to be completely covered with rust, and the front tire full of cracks. A box of watches was received in this port; on being opened in my presence, several of the crystals were found to be broken. These watches were very cheap—from \$2 to \$6. They were packed in a thin cardboard box, and when it is known that watches can be repaired in only a very few places in China, that a crystal costs 50 to 60 cents, and to send a watch to Shanghai involves another 50 cents, it is easy to see that the original cost mounts up very rapidly, before the dealer can even place it on the counter.

The bicycle referred to had to be sent to Shanghai for a new tire, costing \$24 Mexican; the machine in the first place cost only \$140 Mexican. Here was an addition of \$24 before it could be used, besides the loss of its use for five weeks, due entirely to the carelessness of the shippers.

It is such cases as the above (I have only detailed those that I have personally seen in the past two months) that hurt our trade. I never hear of such complaints about English goods. In the United States, the remedy is to return the purchase; but in China that is out of the question, on account of distance and freight.

I understand that German merchants have a method of settling such cases by arbitration at their consulates. A merchant in China receiving a consignment from Germany not up to the mark lays the matter before the German consul, who, after an examination into the case, gives his decision, which is sent to the shipper in Germany and by him honored. I believe that this would be a good plan for American merchants to adopt.

I recently saw an order for 500 wheelbarrows, 1,500 shovels, and 1,000 picks; and I am inclined to think that a market can be made here for a far greater number. Wheelbarrows used here are heavy, clumsy affairs, all wood. They can not be oiled, and the noise caused by the turning of the wheel in the hub is unpleasant; besides, wood turning on wood does not make an easy wheel.

JOHN FOWLER,
Consul.

CHEFOO, *December 15, 1898.*

TELEPHONE AND TRAMWAY SYSTEMS IN SHANGHAI.

In reply to an editor of a New York publication,* Consul-General Goodnow, of Shanghai, writes as follows, under date of November 17:

The council of the city of Shanghai is now advertising for proposals for telephone and electric-railway systems. The specifications can be seen at the council's agency in New York City, or copies can be obtained from the city engineer here for 25 taels each (a Shanghai tael is equivalent to about 65 cents gold). Bids on the telephone franchise must be in by March 31, 1899; while bids for the tramway franchise must be in by March 15, 1899.

Shanghai lies on the west bank of the Whangpoo River, about 12 miles from the Yangtze River. The city extends about 3 miles along the river and from half a mile to 1 mile back from it. It is densely populated, principally by Chinese, the estimated population being over 300 per acre. Negotiations are in progress between the Chinese authorities and the English, French, and American consuls-general, whereby it is hoped that such an extension of the settlements will be made that the city will be enlarged to more than three

* To whom copy of the letter has been sent.

times its present area. The present settlements—three in number—were originally ceded (1845) to the American, English, and French Governments for the residences for their citizens, the land being held by the separate owners on perpetual lease from the Emperor. The American and English settlements are in one municipality, governed by a council elected annually by the ratepayers. The French settlement is governed by a council elected by the ratepayers of that settlement. Actions brought against the municipality are tried by a court of consuls, now consisting of the American, English, and German consuls-general. In all suits against individuals or companies, the defendant is entitled to trial before the court of his own nationality and under its laws. The municipal police and other local regulations are recognized as law by the various consuls. So thoroughly is this a cosmopolitan city, that any changes in its regulations must be approved by the entire consular body and the diplomatic body at Peking before they become operative.

The city is almost perfectly flat, and the average height above high water is about 2 feet. The soil is alluvial. The yearly rainfall is 44.24 inches. The highest temperature ever observed was 102.5° F. in the shade; the minimum, 10.5° F. Coolie labor is paid about 25 cents Mexican per day, but this can not be compared with the white labor of the United States for efficiency.

From the foregoing, it will be seen that a contractor for city work must deal with the council of the Anglo-American settlement, with that of the French settlement, and with the Chinese authorities for any franchise which is to include all Shanghai and the surrounding country. This fact, and the additional one that the foreigners are divided from the Chinese and from one another by racial and national antagonisms, will make it difficult to obtain any franchise covering the entire city. But the necessities of the case may force the granting of the two franchises in question. There are about 5,650 foreigners in the settlements and 410,000 Chinese. There are 200,000 Chinese in the suburbs. The city's income is about 730,000 taels (\$474,500), and its debt is 1,131,800 taels (\$735,670).

The telephone company in Shanghai operates 338 telephones, charging an annual rental of from 60 to 70 taels. The instruments are of the oldest style and the service is not good; but, as is usual when a company is already in possession, it will have an advantage in the coming competition, knowing the local conditions and the people. The council proposes to give a thirty years' exclusive franchise, reserving an option to purchase after fifteen years. It requires a deposit of 10,000 taels (about \$6,500) with the bid as an evidence of good faith. If good telephones could be furnished at a reasonable rental, I believe that many times the present number

would be used, for the Chinese seem very partial to electrical appliances. In the matter of cost, the telephone has a sharp competitor in the cheap labor of the country. A coolie can be hired to carry chits (letters) for \$5 Mexican (\$2.37 gold) per month. With a poor telephone service, the coolie is more reliable and much less wearing on the temper than is the wire. Probably nine-tenths of the messages are carried by coolies at the present time.

The tramway problem is a much more complex one. It is proposed to give a franchise for thirty, forty, or fifty years; but the tender accepted by the council must afterwards be ratified by the ratepayers. The specifications fix a maximum first-class fare of 10 Mexican cents and a maximum second-class fare of 5 Mexican cents for transporting passengers from one point to another on the lines. A deposit of £10,000 is required with the bid as an evidence of good faith. About 23 miles of track are to be laid at once. An overhead-trolley system, supported by iron poles, is asked for, as it is not thought an underground system is practicable where the water stands so near the surface of the ground. The streets along which the proposed roads are to run are macadamized with broken granite on a foundation of broken brick. There are twelve small bridges which will have to be strengthened.

The details of construction and operation are largely matters of experiment, as there has been no rapid transit in this country; and they should be carefully studied by experts on the ground. An American gets little realizing sense of conditions here by what is written. Everything is so foreign to his ways, ideas, and manners that only the evidence of his eyes will convey a clear conception.

Since the Japan-China war, Shanghai has rapidly developed into a manufacturing as well as a distributing center. Rents and values of real estates have trebled, but wages and profits have not increased proportionally. The immediate need is for means by which the suburban territory can be brought within reach of the business center. Present methods of locomotion are too slow and expensive to enable the clerk with an average salary to live beyond walking distance from his work. The population here is sufficient to support a tramway system, and the congested condition of the present city will force people to build at once along the proposed lines of railway extension.

At present, the ordinary conveyance is the two-wheeled jinrikisha, of which there are about 7,000 now in use in this city, drawn by coolies. The fare is 15 cents Mexican per hour. The passenger is carried directly to his destination and landed at the curb or doorstep, instead of in the middle of a possibly muddy street.

The streets of Shanghai are, generally speaking, both narrow and

crooked. The Chinese have a habit of walking in the middle of the street, in sublime indifference to everything and everybody. They are as curious as children, and will want to discover what there is in the wire to make the car go. How much difficulty will be occasioned by these peculiarities will be learned only after experiment.

While a tramway franchise here, on proper terms, will undoubtedly be remunerative, I can not too much emphasize the necessity of study and care in bidding. The conditions here are new to our people. The people of Shanghai know nothing of the essential elements of electric transportation. Only an expert, after a careful study of the situation on the ground, can make an intelligent bid.

DEVELOPMENT OF KYAO-CHAU.

Information as to the opening of the port of Kyao-chau was received from Ambassador White, of Berlin,* and also from Minister Conger, of Pekin, under date of September 6, 1898. On January 21, 1899, Mr. White sends from Berlin copies of a report upon the government of Kyao-chau, which has been recently submitted to the Reichstag. The report states that the object is to advance the commercial development of the place, and—without detriment to its military importance—to make it first of all a trade colony. Reference is made to the facts that the whole of the district was made free to the trade of all nations on September 2, 1898, and that, in order to facilitate trade with China and to avoid delays at the frontier of the district, a Chinese custom-house has been established within the German district, near the landing place.

Consular Agent Harris, of Eibenstock, in a report on the development of Kyao-chau, bearing date of January 20, 1899, says:

The citizens of all nations may settle in Kyao-chau under the same conditions as the Germans themselves. The Government will grant no trade monopolies and will maintain the right of supervision in exceptional cases only, as, for example, the sanitary arrangement of buildings.

The most important factor, however, in the commercial development of the colony will be the opening up of direct communication with the interior. Owing to the want of navigable water ways from Kyao-chau into the interior, railroads will be built as rapidly as possible. The initiative of these enterprises will be left to private capital. A powerful syndicate is now being formed for this purpose. One immediate result of a railroad into Shantung will be the opening

* See CONSULAR REPORTS No. 218 (November, 1898), p. 468.

up of the great coal fields of that province. In the territory occupied by Germany, no minerals of importance have been discovered.

The Home Government will strive to make the colony financially independent, and will also grant the right of self-taxation.

The fundamental idea in the development of the colony is the securing of a solid basis from which Germany may distribute her home productions into the interior of China.

REGULATIONS FOR MINES AND RAILWAYS IN CHINA.

Minister Conger sends from Peking, under date of December 6, 1898, translation of the regulations prepared by the bureau of control for mines and railways,* with a view to protecting and encouraging honest promoters, as follows:

(1) There are three ways in which railways and mines can be managed—by officials, by merchants, and by the two in combination. The second is the best and will be encouraged and promoted by the Government as much as possible in the future. The officials should do all in their power to encourage such enterprises, but will not be allowed to conduct them themselves.

(2) All such enterprises for which contracts have not been completed before the establishment of the Government board must be sent up to the Throne for sanction, but from the date of the establishment of the said board they will be subject to the regulations of the board. Enterprises which have been previously arranged will not be allowed to form precedents.

(3) The mines and railways of Manchuria, Shantung, and Lungchow are affected by international relations and therefore will not be allowed to form precedents either for Chinese or foreigners.

(4) Railways and mines are entirely separate affairs, and therefore must not be worked in combination. Railway agreements giving mining rights along the route will not be allowed to form precedents in future. In cases where permission is given to mining companies to construct branch railways to connect with water ways and for the purpose of carrying the produce of the mines, such lines must only be carried as far as the nearest water communication. Such railways must not carry passengers or cargo so as to interfere with the profits of other lines. Plans of such proposed railways must be submitted to the Government for approval.

(5) All mining and railway companies must provide a school of instruction, as already ordered by the Throne.

(6) When applications are made by Chinese gentry or merchants to the local officials for permission to engage in mining or railway enterprise, the said officials must inquire into the character and standing of the applicants, and if the latter are found to be reliable people and their applications are not in opposition to the regulations, they may be submitted to the Government board. The local officials have no power to grant such applications. If such applications are made to the board direct, inquiries must be made through the officials of the applicants' district, and only such applications will be granted in which the report of the local authorities is of a favorable nature.

* See CONSULAR REPORTS No. 219 (December, 1898), p. 564.

(7) When it is necessary to acquire land for mining and railway purposes, the people must be notified by the local authorities, and the former must not show wanton opposition. When land is so acquired, houses and graves must be respected so as not to offend the feelings of the people.

(8) All enterprises sanctioned by the board must be commenced within six months of the date of sanction; otherwise, the sanction will be withdrawn, unless it can be shown that the delay was unavoidable.

(9) In all cases, every endeavor must be made to have the Chinese proportion of the capital of such enterprise the greater. There must be a proportion of at least three-tenths of the shares owned by Chinese. When this proportion has been raised, foreigners may be invited to buy shares or foreign money may be borrowed. Sanction will not be given in cases where all the money employed is foreign.

(10) When it is proposed to borrow foreign money, the sanction of the board must first be asked. If such sanction is given, the loan must be regarded as being made by merchants and to be repaid by merchants—that is to say, the Chinese Government will accept no responsibility. If loans are concluded without the sanction of the board, they will not be recognized, even though an agreement has been signed.

(11) In case of foreign loans, the preliminary agreements must be submitted to the board for their approval. If such agreements are contrary to these regulations, they will be sent back for amendment. In case they are not amended properly, negotiations may be entered into with other parties. Should foreign merchants enter into private contracts for loans and thereby suffer loss, the Tsungli Yamên and the board will not help them recover their money.

(12) When Chinese companies are authorized to borrow foreign money, the board will advise the Tsungli Yamên, which will communicate with the minister of the power concerned, who will reply, and their permission will then be considered to be given. When foreign merchants are desirous of lending money to Chinese companies, they must request their minister to communicate with the Tsungli Yamên, who will ask the board if the company is authorized to borrow and will reply accordingly to the minister. Money lent in any other way will be treated as a private loan.

(13) In order to protect the sovereign rights of China, the control of all railways and mining companies, irrespective of the foreign capital concerned, must remain in the hands of the Chinese merchants; but the accounts of such companies must be open to the inspection of foreign shareholders.

(14) Promoters professing to have a certain amount of capital must show satisfactory proof of their assertion.

(15) The local authorities must in all cases encourage and protect mining and railway companies, in carrying out their duly authorized enterprises.

(16) In case of disputes between companies or any interference with the rights of any company, the local authorities must decide the question fairly. Appeal may be made against their decisions to the Government board. Should disputes arise between Chinese and foreign merchants, in connection with railway or mining enterprises, they must be settled by arbitration; the governments concerned will not interfere.

(17) Foreign engineers and surveyors sent to inspect mines and railways must be protected by the local authorities.

(18) Rewards will be given to Chinese merchants investing 500,000 taels and upwards in mining or railway enterprises, or doing extra good work in connection therewith.

(19) All such enterprises will be granted a monopoly for a fixed period, the duration of which will be determined by the circumstances of the case.

(20) Customs stations will be established on all railways for the levying of duties. The duties on mining produce and on the export of the same will be decided by the Government board in conjunction with the board of revenue, which will draw up regulations for submission to the Throne. The proportion of profits to be paid to the Government for railways will be four-tenths, and for mines 25 per cent, to be handed to the board of revenue.

(21) The affairs and accounts of each company will be examined from time to time by the Government board, either by having the books sent to the offices of the board or by deputing an officer to examine on the spot.

(22) A detailed account of the affairs of the railway and mining companies at present in existence must be sent to the board for consideration. The board will also prepare forms for setting forth such details. These will be sent to all the provinces and must be filled up at the end of each year by such companies, and sent to the board for inspection.

The regulations, adds the minister, have received imperial approval.

Under date of December 10, Mr. Conger transmits translation of a report by the bureau of control for mines and railways, stating that no records are kept of rates of freight and fares for passengers on certain railways, on which the traffic is already considerable; nor is there any available information about the status of construction, number of trains, time tables, etc. The Mo-ho gold mine and the Kaiping colliery, the report says, have been successful; yet the bureau has no detailed report of the output, etc. In the regulations for coal and iron mining in the provinces of Shansi and Honan, a Government tax of 5 per cent has been levied on the value of the mineral output; this rule, the report urges, should be followed with other mines. The bureau recommends that all companies organized but not officially approved before the date of the edict establishing the bureau, shall be considered unauthorized.

CONCESSIONS TO ENGLISH IN SZECHUAN.

Consul Fowler sends from Chefoo, under date of December 7, a clipping from the Peking and Tientsin Times, as follows:

To those of our readers who have long and with good reason been pessimistic as to the prospects of a genuine and substantial development of British interests in the Chinese Empire, the news we publish to-day of Mr. Pritchard Morgan, M. P., being intrusted with the working of the mines of Szechuan province, will be very welcome.

Szechuan, as we all know from the writings of men like Cooper, Gill Hosie, Baber, Morrison, Little, and others, is, with its 60,000,000 or 70,000,000 of inhabitants, one of the richest provinces in the Empire. Agriculturally, it may be looked upon as the garden of China, and its mineral resources include gold, silver, copper, coal, petroleum, etc., in quantities sufficient to pay even with the present crude methods of working and subject to the squeezing we all know so well. The Yangtze River bordering this province is the natural highway between it and the sea and gives

incalculable advantages over other stretches of country equally distant from the coast. It is gratifying to know that this valuable concession has been granted to Mr. Pritchard Morgan, who has labored so indefatigably for the past two or three years and spent money as well as time most freely in his endeavors to benefit both China and British enterprise, while he has made, as a natural consequence, a great many friends here who are proud of his success.

Mr. Pritchard Morgan is to be congratulated on the success of his enterprise, which represents the first combination of Chinese and foreign capital for a common object, and is at the same time of such industrial and national value and importance.

We understand that an expedition composed of English and American engineers under the command of Mr. Burn Murdoch will leave Shanghai within the next three weeks for Szechuan.

Consul Fowler adds:

Mr. Pritchard Morgan called at the consulate yesterday and told me that on his way back to England he intended to visit the United States, in the endeavor to interest capitalists, as it was to be an Anglo-American concession. The concession will be of the greatest value to the American Hankau-Canton railroad syndicate. It is important that Americans interest themselves in these enterprises in the East. Mr. Morgan's London address is Queen Victoria street, No. 1 E. C., London.

FOREIGN LOANS IN CHINA.

The Department has received from the Chinese legation, under date of Washington, January 17, 1899, translation of a dispatch from the Tsungli Yamên at Peking, prescribing the necessary course to be pursued in contracting foreign loans for opening mines and constructing railroads in China. The legation requests that this be brought to the attention of American capitalists. The dispatch reads:

On the 4th day of the eleventh moon in the seventeenth year of Kwanghsu (December 4, 1891), this Yamên transmitted to the representatives of foreign powers at Peking copies of a joint memorial presented on the 24th day of the tenth moon in the seventeenth year of Kwanghsu (November 25, 1891), by the board of revenue and this Yamên, which provides that in the negotiation of a foreign loan by Chinese officials, of whatever rank, the agent for the interested foreign capitalists is required to report first to the representative of his country at Peking and ascertain from the Tsungli Yamên whether the matter has been reported to and sanctioned by the Throne before making the loan; and that if a loan is made privately, notwithstanding the fact that there is no evidence of imperial sanction, the Government will neither recognize the claim nor undertake to compel restitution in case of trouble, though the official seal may have been affixed to the contract. On the 7th day of the eleventh moon (December 7, 1891), copies of the above-mentioned memorial were sent to the diplomatic representatives of China abroad with the request that copies be communicated to the departments for foreign affairs of the respective

countries to which they were accredited, in order that the same might be published for the information of foreign capitalists.

On the 24th day of the sixth moon in the twenty-fourth year of Kwanghsu (August 11, 1898), a memorial was presented to the Throne by the department of mining and railroads, reporting the establishment of that department at Peking and recommending that the various propositions started by officials and private individuals before the establishment of the department but not adopted should not be deemed as settled, and was duly approved by the Emperor.

Now on the 28th day of the seventh moon (September 13, 1898) copy of a memorial to the Throne presented by Hu Yu-fan, governor of Peking, was received from the privy council, proposing that the Tsungli Yamèn be commanded to inform all the diplomatic representatives of foreign powers at Peking, with the view of their notifying the capitalists of their respective countries, that all contracts for foreign loans entered into by the provincial authorities for the opening of mines and the construction of railroads without the written approval of the Imperial Government shall be deemed null and void, together with an imperial decree ordering the Tsungli Yamèn to devise means for carrying the same into effect.

In view of the undeveloped state of the mineral resources of the various provinces of the Empire and the initial stage in the construction of trunk and branch lines of railroads, it has been this Yamèn's policy to allow foreign capital to be used for these purposes, to the end that both Chinese and foreigners may derive advantages therefrom. But, in order to obtain good results, affairs must be well managed and money must be economically expended. It is feared that there may be unscrupulous Chinese persons who, claiming with fraudulent intent to be concessionaires of this road or that mine, may enter into private agreements with foreign capitalists for the purpose of obtaining money under false pretenses, and that foreign capitalists may become unwitting victims of such fraud and waste their substance to no purpose. This certainly is not the object of our Government in developing the resources of the Empire, by opening mines and constructing railroads for the mutual benefit of Chinese and foreigners. Now, this Government desires to give it the widest publicity, that all contracts for foreign loans to be expended for the opening of mines and construction of railroads in China, in order to be valid, must be certified and approved by the department of mining and railroads, and that all agreements privately entered into with foreign capitalists without the certification and approval of the department, no matter how large the amount of subscribed capital may be for the purpose of opening mines and constructing railroads, shall be deemed null and void, so as to put a stop to all fraud and deception and encourage fair and honest dealing. Copies of this communication have been transmitted to the diplomatic representatives of foreign powers at Peking, and you are requested to communicate a copy of the same to the Secretary of State for his information, and when you have received his reply to send a copy to this Yamèn.

Dated this 12th day of the ninth moon in the twenty-fourth year of Kwanghsu (October 26, 1898).

COTTON GOODS IN CHINA.

Consul-General Goodnow transmits from Shanghai, on January 8, 1899, copy of a circular making a comparison of imports of cotton goods and yarns into all China in 1887 and 1897. The consul-general adds that he believes the statement to be correct.

Description of goods and origin.	Imported from country of origin.			
	1887.		1897.	
	Quantity.	Value.	Quantity.	Value.
<i>Plain gray and white goods.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
English.....	}	84.94	{	65
Indian †.....				2.87
American ‡.....				29.55
Dutch				0.54
Japanese				2.04
Total	100	100	100	100
<i>Fancy goods.</i>				
English §.....	100	100	94.68	98.83
Japanese			5.32	1.17
Total	100	100	100	100
<i>Yarn.</i>				
English.....	}	100	{	3.27
Indian †.....				78.66
Japanese				18.07
Total				100
<i>Thread.</i>				
English.....				
Grand total.....				

* *English plain goods.*—The falling off with American competition.

† *Indian goods and yarn.*—In 1897, Indian goods had already become important; the weight imported in 1887 was probably about 300,000 lbs.

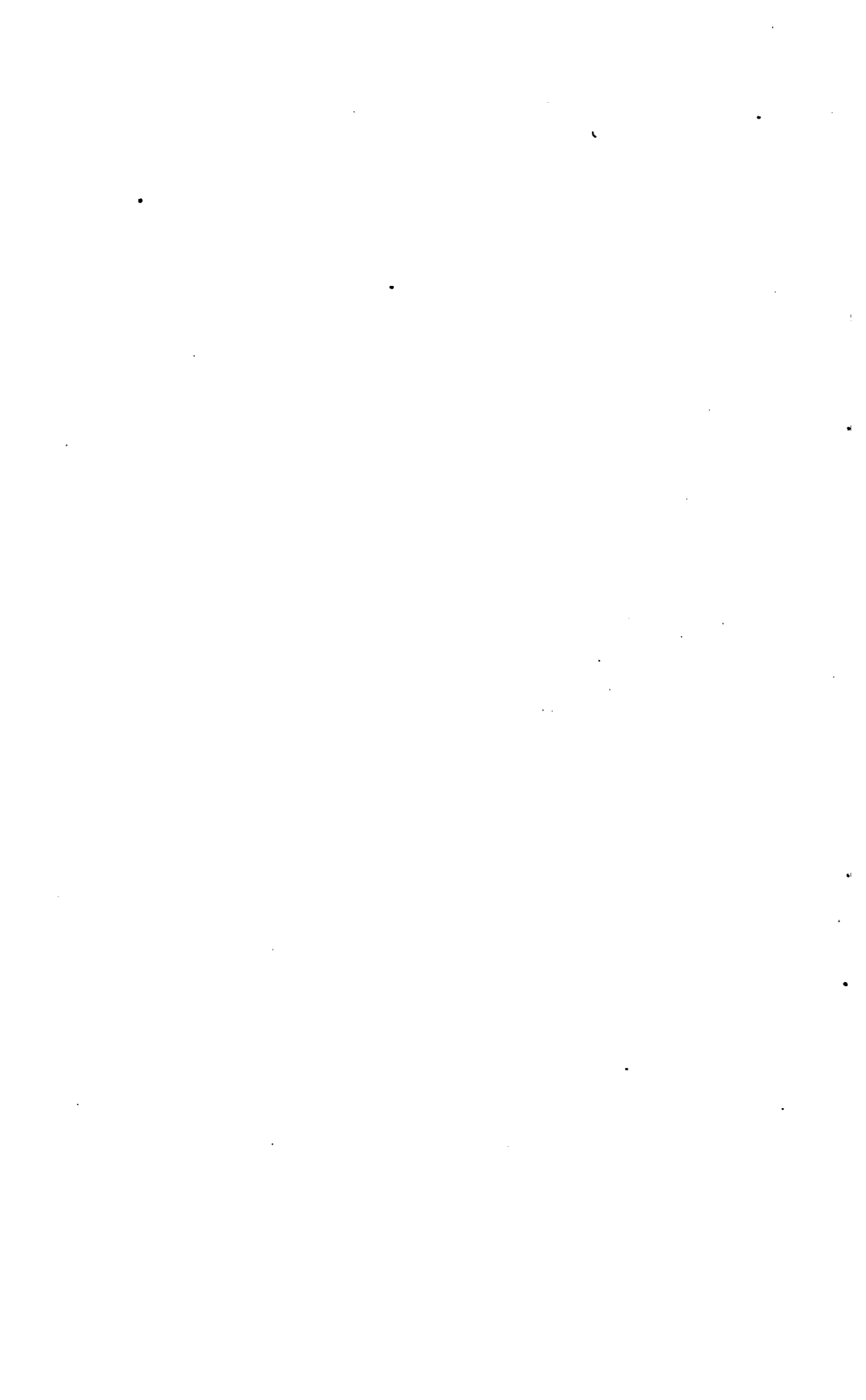
‡ *American plain goods.*—The increase in American goods is now competing with Manchester in lower-grade goods, which formerly they did not touch; is now laying herself out for direct competition with the Lancashire export trade.

§ *English fancy goods.*—The discrepancy in the demand for common fancy goods to meet the Chinese requirement for cheapness.

1 picul = 133½ pounds.

¶ *Indian yarn.*—The difference between the two trades.

Description.	Decrease.	
English.....		
Indian.....		
American.....		
Japanese		
Dutch	£10,850	\$52,802
Total		



TRANSPORTATION CHARGES IN CHINA.

In reply to an inquiry from the director of the Philadelphia Museums (to whom the original letter has been forwarded), Consul Smithers, of Chungking, writes, under date of October 29, 1898:

Foreign goods, on arrival from abroad at any seaport in China, pay duty in accordance with the treaty tariff, and are then forwarded to any treaty port without payment of further duties. Goods arriving in Shanghai are shipped on board steamers to Hankau and thence to Ichang, the present terminus of steam traffic of the Yangtze. From Ichang, they are sent on native boats to Chungking. If goods are sent to the interior from here, half the import duty is levied and collected by the foreign customs, and the goods go to their destination under transit passes issued by the customs.

As to the expense of sending goods from the United States to China, this is no easy matter to estimate. To begin with, there is as yet no direct trade with foreign countries. The trade is with Shanghai or Hankau, and the expense of sending goods to Shanghai, I presume, can be learned in New York or San Francisco, as there are many lines of steamers from both cities to Shanghai. From Shanghai to Chungking, the following tariff of the Chungking Transport Company, issued in 1896, will give an idea of the expenses at different seasons of the year:

Description.	May 1 to October 31.		November 1 to April 30.	
	<i>Taels.</i>		<i>Taels.</i>	
Merchandise .....per ton...	25	*\$16.13	22	*\$14.19
Parcels and all shipments less than 1 ton...per foot...	1	0.645	0.75	0.483
Do .....per pound...	0.02	0.0129	0.015	0.0096

* Taking the value of the Shanghai tael, as estimated by the United States Director of the Mint, October 1, 1898, at 64.5 cents.

The ton is 40 cubic feet, or 2,000 pounds. Freight is payable on measurement or weight, at the option of the company.

The three or four steamship lines plying on the lower river have a combination with respect to freight and passenger charges which stops competition. The tendency, therefore, is to keep up the freight rates, which are very high, considering the distance the goods are carried.

FRANCE'S POLICY IN INDO CHINA.

Consul Thackara writes from Havre, January 12, 1899:

At a moment when the United States has presented to it the problem of governing a colony situated in the western Pacific and 10,000 miles from the seat of administration, the following extracts from a speech recently made at Rouen, France, by Mr. Paul Doumer, French governor-general of Indo China, will prove of interest in illustrating the policy recommended by this functionary in the management of that great oriental possession.

At a banquet given in his honor by the chamber of commerce of Rouen, Mr. Doumer, in the course of his remarks, said:

Our colony of Indo China has a surface three times as great as that of France and possesses 25,000,000 inhabitants. It accordingly goes without saying that it offers not only advantageous outlets for the sale of our products, but a desirable place of residence for the toilers of our overcrowded cities.

The quodlibet which has presented itself to the administrators of this colony was the proper action or means to be taken in order to create and increase a market there for the manufactured products of France. For it may be said that this is a colony's *raison d'être*. In other words, the purely administrative government of a colony is a relatively easy matter to deal with when compared with the development of its commerce. Those appointed to guide the destinies of our foreign possessions should spare neither effort nor application in widening the outlet therein for the fruits of our home labor and industries. The manufacturers, on their part, should also make every effort to maintain their supremacy and distance all rivals in what should, by right, be their own market. Among the 25,000,000 inhabitants of Indo China, they should find 25,000,000 customers.

When we turn to our colonies in Africa, where the wants of the natives are limited, the field becomes one which will admit of but a restricted degree of development. In order to build up extensive trade relations with a colony, it is imperative that that colony should produce staples itself, so that a system of commercial exchange may be established, for goods are practically paid for by goods.

Indo China is a rich country, and, in direct antithesis to our African colonies, its inhabitants are ingenious and industrious. The duty of our Home Government is therefore clearly laid out for it. It should use every means of developing the natural advantages of Indo China and seek to offer it the means of increasing the production of its staples.

We should urge emigration thither, in order that the French may carry with them into that fertile land their intelligence as well as their capital; while those who are neither business men nor financiers can cultivate the soil advantageously and find a ready sale for tea, coffee, rice, pepper, etc. Even at the present time, the products of Indo China are successfully competing with many British colonial products. We have a line of steamers running to Saigon, and it goes without saying that the vessels which bring us the staples I have just mentioned return with manufactured articles from France.

To encourage the production of these staples, however, is not in itself sufficient. We must offer them as merchandise the advantages of proper and rapid transpor-

tation. If we fail to provide railways for carrying them to the ports, they are like so much wealth locked up in a strong box.

As governor-general, I have, in the interest of the colony, expended all I possibly could in public works. We have expended not less than 1,000,000 francs in irrigating the soil and 2,000,000 francs in cutting canals, making rivers navigable, and building railroads. But I have asked the French Government for a loan of 200,000,000 francs in order to further improve the condition of its eastern colony. Some consider this too much; but it must not be imagined that the 200,000,000 francs will be taken away from France, or that the loan will be like so much money withdrawn from circulation, for more than two-thirds will be expended in enriching French industries. Your foundries will send us iron for bridges and buildings, your rolling mills rails, your forests sleepers, your car shops rolling stock, your quarries slate, and your hills cement. All these will be carried to the Orient by French ships, giving employment to French people. We have already on the Red River a bridge which was made at Creil, near Paris, and which cost 6,000,000 francs. I mention this merely to illustrate where the bulk of the capital advanced to Indo China would go.

Let us make every effort, then, to develop the resources of Indo China and increase its commercial relations. As yet, there are not enough French houses engaged in business or having branches there. The taste for colonization should be encouraged among our people, and those who are at liberty to emigrate should establish themselves at Hanoi, Haiphong, and Saigon.

Our colonies, and Tonkin in particular, have cost us a great deal. We have already spent there 1,000,000,000 francs and lost many human lives. The time has now come to reap the harvest of our expenditure and the fruits of our labors.

Under date of January 19, the consul adds:

It may be interesting to note the wonderful success of the first issue of an Indo-Chinese loan in France.

By virtue of a law dated December 25, 1898, the government of Indo China was empowered to create a loan of 200,000,000 francs, the proceeds to be used exclusively in the construction of railroads in that colony. The revenues of the colony are to be the collateral for the payment of the loan and the interest thereon.

The first issue of one hundred and ten thousand 500-franc 3½ per cent bonds was offered to the French public on Saturday, January 14, 1899, at the price of 450 francs each. The bonds are payable at par in seventy-five years, in semiannual drawings, which will take place in Paris on the 1st of April and the 1st of October each year, commencing October 1, 1899. The interest (17.50 francs) on each bond, commencing February 1 next, is also payable half yearly.

The subscription list was closed the same day it was opened, as the amount of the issue was bid for thirty-six times over. There were enough subscribers for a single bond to cover the entire amount, which in itself is good evidence of the thrift of the masses of the French people and of the efficacy of a popular loan.

The railroads to be built under the new loan are from Haiphong to Hanoi and to Kaokay, from Hanoi to Nam-Dinh and to Vinh,

Tourane to Hué and Quanq-Tri, Saigon to the Khanh-Hoa and to the Lang-Bian, Mytho to Cantho.

The construction of these roads will open up a market for steel rails and other railroad material, which, unfortunately, can not be utilized by our American manufacturers, as, according to the terms of article 4 of the law of December 25, 1898, creating the loan, all material necessary for the construction of the above-mentioned railroads not found in Indo China must be of French origin and must be carried in vessels flying the French flag.

NEW INDO-CHINESE TARIFF.

The new French tariff law relating to commerce between France and Indo China has attracted no little attention in Lyons, on account of the new rates imposed upon silk. It fixes both import and export duties. The export duties do not apply to merchandise coming from Indo China to France. Thus, raw silk going to New York or Genoa pays a duty of 10 cents per pound; but, if destined to Marseilles it is duty free. No merchandise can leave Indo China without paying a duty, unless it goes to France. This is believed to be a good stroke in the interest of the French commercial marine.

The following are a few of the export duties: Rice, 32 to 76 francs (\$6.17 to \$14.66) per 100 kilograms (220 pounds), according to quality; coffee, 10 francs (\$1.93); tea, 10 francs; raw cotton, 10 francs; dyestuffs, 1 franc (19 cents); prepared dyestuffs and a number of other products, 3 per cent; raw silk, reeled, 100 francs (\$19.30); waste silk (frisons déchet), 100 francs. The tariff is assessed upon lots of 100 kilograms (220 pounds).

A new schedule of rates is imposed upon merchandise entering Indo-Chinese ports, somewhat different from the rates obtaining in France. Live animals are free. Sugar from foreign countries is prohibited. Coffee pays 75 francs (\$14.47) per 100 kilograms; tea, 4½ cents per pound; Habana tobacco, 14 cents per pound; Chinese tobacco, 1 cent per pound; raw, unbleached silk thread, 18 cents per pound; dyed thread, 28 cents per pound.

Silks, foulards, tulles, hosiery, ribbons, crapes, passementerie, and kindred products of Chinese origin, are taxed 19 cents per pound; embroidery, of Chinese origin, 45 cents per pound. Silk garments, not embroidered, pay 28 cents per pound; embroidered, 75 cents per pound.

The city of Lyons is more active than any other city in France in promoting business relations with the extreme Orient. Five of

the specialists who went from this city to China and spent two years there studying industrial and commercial conditions are now permanently established in that country. It is announced that M. Henri Brenier, the director of the Lyonese-Chinese commission, is soon to return there and to assume official direction of the work of promoting French interests.

LYONS, *January 9, 1899.*

JOHN C. COVERT,
Consul.

FRENCH TRADE WITH SIAM.

The French Bureau of Foreign Commerce, whose attention is especially directed to the increase of trade with the colonies and protectorates of France and the countries of the extreme Orient, has recently been informed of the necessity of greater efforts in this direction with Siam. The general trade of that country is rapidly growing. In 1895, it aggregated \$24,119,159. In 1897, it had augmented some \$7,000,000. The exportations in 1897 were \$16,700,000, consisting of rice, teak wood used in building ships, cattle, hides, peltry, roots, and nuts.

Importations into Siam are annually increasing in importance, as the people are beginning to use more European goods. In 1895, the imports increased 9 per cent; in 1896, 9 per cent; and in 1897, 21 per cent. It is suggested that, as France has two advantageous bases from which to operate—Tonkin and Cochin China—she ought to possess a large part of this trade. Yet her trade there is insignificant. Of the ships entering the port of Bangkok, 75 per cent fly the English flag; and these ships carry 96 per cent of the imports into and 66 per cent of the exports from Siam. The importations from France into Siam amount to not quite \$100,000. It is true that most of the importations into Siam come in English ships, and merchandise of another origin may be credited to England. The Siamese buy chiefly shirtings, adrianoples, and tissues of cotton and silk. A little silk is imported, but entirely from Japan and China. The merchandise from France consists chiefly of common jewelry, wine, parasols, umbrellas, knickknacks, toys, and gloves.

The *Moniteur Officiel du Commerce* calls upon the French business men of Tonkin, Cochin China, and France to make an effort to change the "ridiculous proportions" of the French trade with Siam.

The attention given to the commerce of Siam is another indication of the growing interest of the French people in colonial and oriental trade. It is there that new markets are looked for as an outlet to the constantly increasing production of Europe. The

exports from France to her various colonies and protectorates now aggregate something over \$75,000,000 annually. The imports foot up \$74,000,000 in round figures. The population of her colonies and protectorates is 52,000,000.

England still holds the supremacy in China, as well as in Siam. In 1897, 20,000 English ships entered the nineteen treaty ports of China, against 2,140 from Germany and 174 from France.

Germany's foreign trade increased from \$1,508,206,000 in 1881 to \$1,772,624,000 in 1895. Of this increase, \$140,000,000 was in trade with Brazil, the Argentine Republic, Chile, and British India.

The people in the countries mentioned are using more European goods than ever before, and a constantly increasing market may be looked for in that direction. It is in such markets that Europeans expect to find a compensation for the loss of trade they mutually suffer from their own protective tariffs.

JOHN C. COVERT,
Consul.

LYONS, *December 5, 1898.*

AN INDUSTRIAL OPENING: CRUSHING OF COPRA.

The occupation of the Philippine Islands by the United States suggests the possibility of a transfer to the United States of an industry which is now almost exclusively confined to the city of Marseilles. The crushing of oleaginous seeds and cocoanuts, for the extraction of the oil they contain, has for many years given employment to hundreds of workmen, and the skillful use of blended oils in the manufacture of soap gave to this city its world-wide reputation for the latter. In more recent times, the American cotton-seed oil has to a large extent replaced the copra or cocoanut oil, at the same time severely crippling the seed-crushing business. A soap manufacturer advises me that the cotton-seed oil can not, however, entirely supplant the cocoanut oil, as the former, if used alone, produces a soap too soft to be acceptable to commerce; and the latter, if unmixed with cotton or peanut oil, makes a soap as much too hard. I am informed that a mixture of about half and half produces the best results, and that the failure of Marseilles manufacturers to maintain these proportions has been followed by a distinct falling off in the quality of some famous brands of Marseilles soaps.

The copra or cocoanuts crushed in Marseilles come almost exclusively from the Philippine Islands. In the year 1897, the imports amounted to 686,120 metric quintals,* in addition to which 31,910

* 1 quintal = 220.46 pounds.

metric quintals were imported from the French colonies. The highest price paid at Marseilles during 1897 was \$6.94 and the lowest \$5.31. The nuts fall from the trees and lie on the ground until the hard shell separates from the kernel and decays. The kernel appears to lose none of its useful qualities, though permitted to remain on the ground for a year or more. When a favorable opportunity occurs, the copra is gathered, dumped into some small coasting boat, and eventually reaches Marseilles. At the present time, the price is uncertain and almost double the average figure, because of a complete suspension of arrivals from Manila. On January 11, the total stock of copra in the docks and warehouses was only 1,530 quintals, and the fear now prevails that the troubles among the natives will prevent the shipment of any considerable quantity for some time to come.

The assurance that means of communication between the Philippines and the United States will soon be established will make it appear easy for American capital to build and operate crushing mills; and, with cotton oil in unlimited quantities to draw upon, the manufacturers of soap will be in possession of additional resources for carrying on their business.

ROBERT P. SKINNER,
Consul.

MARSEILLES, *January 16, 1899.*

PLATINUM IN THE YUKON: SANITARY CONDITIONS.

Consul McCook writes from Dawson City, December 5, 1898:

Platinum has been recently discovered in the black sand which is found in great quantities in most of the creeks here; and, if the result is as good as is reported in the following clipping from a local paper, the Yukon district will have a new product of value:

The following account of the analysis of common-looking and supposedly worthless black sand will prove of great interest to all who have the future of this country at heart. Black sand is found in almost every stream in the Yukon territory and, while considered a good indication of gold in more or less quantity, is always a nuisance to washers. On account of its great specific gravity, it remains in the sluice boxes with the gold, and even hand panning will not always separate it from the precious metal it accompanies. During the clean-up, many tons of this sand are thrown out, yet the analysis of 12 pounds of it taken from near the mouth of the Hootalinqua would tend to show a distinct value for this supposedly by-product. The dredging company of which Capt. Jack Crawford is the resident head has obtained considerably over a hundred miles of rivers for gold dredging, part of which is a long stretch of the Hootalinqua near its mouth. In a test last summer, fine gold was sluiced in paying quantities; but it is not of that gold we wish to speak. In washing a cubic yard and a half of gravel, the short sluice boxes became badly

congested with black sand. The sand and gold dust were taken up and the gold carefully removed. The sand was not thrown away, as is usual, but brought to Dawson. Dr. Willis E. Everette, a metallurgist of national reputation and a member of the bar of the Supreme Court of the United States, is official assayer of Captain Jack's company and has a most complete and expensive assay office on Second avenue. The sand was given him for examination, and the most surprising results were obtained.

To commence at the beginning, it was readily found that 25 per cent of the black sand was not magnetic iron oxide. With magnets the two were easily separated, and between the two sands there was little difference except that the non-magnetic sand appeared of slightly finer grain than the magnetic. A furnace test of the magnetic sand was divided into lots, mixed with the proper fluxes and introduced into the furnace. At the proper heat all but the metals wanted were volatilized or ran into slag, leaving buttons of platinum and gold. A careful weighing upon scales which weigh to the one forty-eight thousandth part of a grain showed a most surprising result, a result which is bound to revolutionize sluicing methods as practiced to-day in river dredging. In 1 ton of the nonmetallic black sand there is \$102 in gold and 96 ounces of platinum, some iridium, and a trace of tin. The platinum at \$8 per ounce would amount in value to \$768, making the total value of a ton of the sand \$870.

In some localities the sand is most plentiful. In this case there were 12 pounds of black sand from a cubic yard and a half of bar gravel. In 12 pounds of black sand there were 3 pounds of the nonmetallic sand. To obtain a ton of this gold and platinum bearing sand would, by the above figures, require the sluicing of 1,000 yards of gravel, which gives the value in platinum and gold of 87 cents per yard. This is entirely outside of any placer gold caught in the sluices or upon the amalgam. With dredgers, on a modern plan, it costs but a few cents to handle each yard of creek-bed gravel, so that if there was not an ounce of free gold in the country it would still be profitable to dredge for black sand.

Dr. Everette's own words are:

"Forty cubic feet of gravel in place gave 12 pounds of black sand by the usual lixiviation process. This black sand assayed and analyzed gave a high value in gold and platinum, with traces of silver, copper, tin, and iridium. The sample, when analyzed for platinum, gave the enormous amount of 96 ounces to the ton, the platinum being in the shape of finely divided minute grains of metal, combined with similar sized grains of excessively fine gold to the value of \$102 to the ton."

At the same operation with the above, Dr. Everette assayed some of the Hootalinqua gold and found it to run a trifle over \$17 per ounce.

It is as yet too early to get any idea of what the output of gold from the different creeks will amount to. There are a great many more men at work this season than last, and it is supposed more gold will be taken out. On some creeks which were considered good, there will be disappointment; while others, called wild cat, and where little or nothing was expected, are being prospected with good results. Quite a stampede has taken place within the past few weeks from here to the Stewart River district. Several new creeks have been discovered in that locality where good prospects have been found. They are called Thistle, Scroggie, Kirkman, Tulare, and Ballart creeks, all tributaries of the Yukon River. A town site is already located at the mouth of Thistle Creek, and also one at the

mouth of Stewart River, both of which promise to rival Dawson. For anyone not having claims, this is the most promising section now. The mining districts in and around Dawson are entirely overdone. On the Alaska side, Forty-Mile Post, Eagle City, Star City, and that vicinity, it is confidently expected that this winter will bring forth good results.

We had one week of severe weather in November, the thermometer ranging from 40° to 50° below zero from the 8th to the 15th. Since that time, the weather has been quite moderate, thermometer ranging from 10° to 20° below zero, which is considered fine weather here.

Several meetings have been held at this office (called by citizens) to devise some means for raising funds to aid the sick and distressed in and about Dawson City. The hospitals have closed their doors to any unable to pay the fee of \$5 per day (formerly \$10), medical attendance extra. The local government authorities have exhausted all funds at their disposal. The revenue from miners' licenses (\$10 each) and recording fee (\$15), recording sale or transfer (\$2), customs duties, and the 10 per cent royalty on the gross output of gold, amounting in all to some \$2,500,000 the past year, is called Crown money, and can not be touched. It is sent to the Government at Ottawa.

The local funds are entirely inadequate to meet the exigencies of sickness and distress at present existing here. The large commercial companies are opposed to any appeal being made for aid from without, fearing it will deter people from coming here next spring and summer.

It is estimated that five thousand persons will have to go out over the ice this winter. What is most needed here is a fund to take care of the sick. Mortality is on the increase, ten bodies waiting for interment to-day. I fear an epidemic will occur in the spring. No sanitary arrangements have been made as yet.

Copy of statement of St. Mary's Hospital, September 1, 1897, to December 1, 1898.

Patients admitted.....	829
Discharged.....	365
Died.....	91
Average number in hospital daily.....	120
<hr/>	
Total expenses.....	\$224, 269
Amount paid.....	164, 000
Deficit.....	60, 269

Out of 726 patients discharged or died, 358 were not able to pay.

GOLD MINING IN ONTARIO.

The Michipicoton mining district is situated on the north shore of Lake Superior, about 130 miles northwest from here, and comprises a tract of about 5,000 square miles.

Gold was discovered in quartz veins in this district in 1897. Quite a rush of prospectors was made to the district and, up to the present, about 500 claims have been taken up, about 40 per cent being taken by citizens of the United States. Two towns—Michipicoton City and Wa-Wa City—have been started, each having post-office, hotels, stores, etc.; a government mine inspector has also been located in the district.

The gold is mostly "free milling" and can be plainly seen in many places, but in some instances it is blended with iron and copper sulphides. Development work has been done on a number of claims by sinking shafts from 20 to 80 feet with cross cuts, but not enough has been done yet to determine the value of the district. Assays run well up, and developments, so far as they have gone, show satisfactory results; it is generally thought that the district will prove to be a rich one.

A prospector in this district must first get a miner's license, which costs him \$10 and is good for one year only, but may be renewed or transferred. Having found a claim, he may take up 22½ or 40 acres lying in a square, and, on recording it, he must pay a fee of \$6 or \$10, according to the size of his claim. This fee must be paid annually for three years, or until he gets a patent.

To get a patent, he must do development work to the amount of one hundred and thirty days' labor for one man in each year for three years, or the work may be done by any number of men, and may all be done in one year.

The best time to prospect is from about the 15th of April to the 1st of June, and from the 1st of August until snow falls, which is usually in October.

The surface is rocky and hilly, and the rocks are covered with a thick growth of moss, which must be scraped off before a vein can be discovered; and the soil is covered with a heavy growth of brush and timber, which makes prospecting much more difficult than in the mountains of the west.

There is now one small stamp mill on the ground, principally for testing work, and one or two larger ones will be on the ground in the coming spring.

To persons desiring to prospect for mineral, I think the Michipicoton district offers good chances of success. The climate from

about the middle of July is fine and healthful, the streams abound in fish, and anyone desiring an outing might combine pleasure with profit by a few months' prospecting and fishing.

A line of boats runs regularly from here during the season, and the Canadian Pacific Railroad passes through the northern part of the district.

SAULT STE. MARIE, *January 14, 1899.*

GEO. W. SHOTTS,
Commercial Agent.

CONDITIONS IN THE KLONDIKE.

There has been a continuance of typhoid fever during the past month, the hospitals, accommodating about 200, being always full and many patients, unable to get in, having to remain in their cabins. Some scurvy cases are coming into the hospitals now. Scurvy in this section, as a rule, is not brought on by the salted food eaten. It appears to come from the system being run down by typhoid. Very few here escape this fever. Many a strong young man, who carried with him over the trail the very best canned vegetables, fresh meats, etc., has brought on scurvy simply from overwork and exposure.

The stampede for claims is over in this section, as the country is all staked. The only question now is relocation.

A rush over the ice to the Stewart River district, some 75 miles from here, is expected shortly. Some good prospects have been found on Thistle Creek and other smaller creeks in that district. The owner of Discovery Claim, on Thistle Creek, has refused \$75,000 for his claim. All of Thistle Creek, 35 miles in length, was staked in two weeks. The other creeks then came in for attention. In all new staking—that is, on territory not previously staked—every alternate block of ten claims is held for the Crown, so that only 50 per cent is really open for staking by miners. This law went into effect last fall.

The prices of provisions in this section still advance. The cost of living for a miner who has to buy his food supplies now averages \$6 per day. There is no reason for the prices asked. There are more food supplies here than can possibly be used, and the supply companies are making immense fortunes. If some firm would send in a few thousand tons of supplies and be satisfied with 200 or 300 per cent profit, it would prove a blessing to the thousands of miners here. Unless the cost of living becomes more reasonable, the poor man who owns a claim can not afford to work it, unless it should prove to be very rich.

DAWSON CITY, *November 1, 1898.*

J. C. MCCOOK,
Consul.

CANADIAN CHEESE AND BUTTER.

The twenty-second annual convention of Ontario dairymen was held at Kingston on January 10, and was attended by several hundred members. As Canadian cheese holds an enviable reputation and is one of the principal Canadian exports, some of the points brought out at the convention are worthy of consideration by American cheese makers.

The principal address was made by the president of the association, D. Derbyshire, one of the most successful Canadian cheese makers. Points that he urged with special emphasis were:

(1) The constant improvement of the curing rooms. "Our market," he says, "is demanding a mild, cool, rich, silky texture and fine-flavored cheese that has not been heated in a curing room or in transit."

(2) The necessity of well-built, well-ventilated refrigerator cars for cheese as well as butter. Thousands of cheese are injured in transit every season, and after a market is won, it can only be kept by paying the closest attention to every detail. Making the best cheese is not the only essential.

(3) The cheese should be forwarded promptly every week. Canada has built up its reputation for cheese, he said, by forwarding its product while it is fresh and in the best possible condition. Those who have yielded to the temptation to hold their cheese for higher quotations have almost invariably lost their trade.

The president of the association also asserts that Canadian creamery butter has reached such high favor in Great Britain that they have an unlimited market for all the fancy fresh creamery butter they can make. He gives the following as the exports from Canada to Great Britain for five years past:

	Packages.
1894.....	32, 055
1895.....	69, 664
1896.....	157, 321
1897.....	220, 252
1898.....	280, 000

H. W. BRUSH,

Consul.

CLIFTON, *January 12, 1899.*

CUSTOMS INVOICES IN CANADA.

Consul McCullough sends from St. Stephen, under date of January 6, 1899, copy of a circular issued by the Canadian customs regarding invoices for customs entry under the general tariff. The circular reads:

SUMMARY FROM THE REGULATIONS AND CUSTOMS LAWS OF CANADA, IN REGARD TO THE DUTIABLE VALUE OF IMPORTED GOODS AND THE CERTIFYING OF INVOICES BY EXPORTERS, FOR THE INFORMATION OF ALL CONCERNED IN THE EXPORTATION OF GOODS TO CANADA AND IN THE IMPORTATION AND CUSTOMS ENTRY THEREOF IN CANADA, UNDER THE GENERAL TARIFF.

VALUATION FOR CUSTOMS DUTY.

Customs act, section 58.—Whenever any duty ad valorem is imposed on any goods imported into Canada, the value for duty shall be the fair market value thereof, when sold for home consumption, in the principal markets of the country whence and at the time when the same were exported directly to Canada. (46 V., c. 12, s. 68.)

Customs act, section 59.—Such market value shall be the fair market value of such goods in the usual and ordinary commercial acceptance of the term, at the usual and ordinary credit, and not the cash value of such goods, except in cases in which the article imported is, by universal usage, considered and known to be a cash article, and so bona fide paid for in all transactions in relation to such article; and all invoices representing cash values, except in the special cases herein referred to, shall be subject to such additions as to the collector or appraiser of the port at which they are presented appear just and reasonable, to bring up the amount to the true and fair market value, as required by this section. (46 V., c. 12, s. 69.)

VALUE FOR DUTY UNDER SPECIAL CONDITIONS.

Customs act, section 64.—The fair market value of goods shall be taken to include the amount of any drawback which has been allowed by the government of any other country, also the amount of consideration or money value of any special arrangement between the exporter and the importer or between any persons interested therein because of the exportation or intended exportation of such goods, or the right to territorial limits for the sale or use thereof, and also the amount or money value of any so-called royalty, rent, or charge for use of any machine or goods of any description, which the seller or proprietor does or would usually charge thereon when the same are sold or leased or rented for use in the country whence they have been exported to Canada. When the amount of such drawback, consideration, money value, royalty, rent, or charge for use has been deducted from the value of such goods, on the face of the invoice under which entry is to be made, or is not shown thereon, the collector of customs or proper officer shall add the amount of such deduction, drawback, consideration, money value, royalty, rent or charge for use, and cause to be paid the lawful duty thereon. (52 V., c. 14, s. 6.)

Customs act, section 65.—No deduction of any kind shall be allowed from the value of any goods imported into Canada, because of any drawback paid or to be

paid thereon, or because of any special arrangement between the seller and purchaser having reference to the exportation of such goods, or the exclusive right to territorial limits for the sale thereof, or because of any royalty payable upon patent rights, but not payable when goods are purchased for exportation, or on account of any other consideration by which a special reduction in price might or could be obtained: Provided, that nothing herein shall be understood to apply to general fluctuations of market values. (46 V., c. 12, s. 71.)

(2) Whenever goods are imported into Canada under such circumstances or conditions as to render it difficult to determine the value thereof for duty, either because such goods are not sold for use or consumption in the country of production, or because a lease of such goods or the right of using the same is sold or given, but not the right of property therein, or because such goods having a royalty imposed thereon, the royalty is uncertain or is not, from other causes, a reliable means of estimating the value of the goods, or because such goods are usually or exclusively sold by or to agents, or by subscription, or are sold or imported in or under any other unusual or peculiar manner or conditions—of all which matters the minister of customs shall be sole judge—the minister of customs may determine the value for duty of such goods, and the value so determined shall, until otherwise provided, be the value upon which the duty on such goods shall be computed and levied. (51 V., c. 14, s. 15.)

DUTIABLE CHARGES.

Customs act, section 66.—No deduction from the value of goods contained in any invoice shall be allowed on account of the assumed value of any package or packages, where no charge for such package or packages has been made in such invoice; and where such charge is made the customs officer shall see that the charge is fair and reasonable and represents no more than the original cost thereof. (46 V., c. 12, s. 72.)

Customs act, section 67.—No deduction from the value of goods in any invoice shall be made on account of charges for packing, or for straw, twine, cord, paper, cording, wiring, or cutting, or for any expense incurred or said to have been incurred in the preparation and packing of goods for shipment, and all such charges and expenses shall in all cases be included as part of the value for duty. (46 V., c. 12, s. 73.)

CUSTOMS REGULATIONS AS TO INVOICES.

(1) Every invoice of goods imported into Canada shall be certified in writing as correct by the person, firm, or corporation selling or consigning the goods, and shall truly show the whole and actual value of the goods in the currency of the country whence the goods have been exported directly to Canada, and the quantity and description of such goods, and the marks and numbers on the packages, in such a manner as to indicate truly the quantities and values of the articles comprised in each exportation package, all of which packages shall be legibly marked and numbered on the outside when of such a character as to enable such marks and numbers to be placed thereon.

(2) If invoices are made out at lower prices for goods exported directly to Canada than the fair market value at the same time and place for such goods when sold for home consumption in the country whence so exported, in all such cases the invoices are also to show clearly, in a special column, or by addition thereto, such fair market value, as aforesaid, for the goods described therein.

(3) In the case of goods consigned to a person, firm, or corporation other than the actual owners of the goods resident in Canada, and in the case of goods which

have not been actually purchased by the consignee or importer in the ordinary mode of bargain and sale, there shall be annexed to the invoice of such goods a declaration to be made by the foreign owner or exporter of the goods in the form approved by order in council.

CERTIFICATES AND DECLARATIONS ON INVOICES.

The certificate of value, Form J (hereinafter set forth), is prescribed under a regulation of the governor in council, in order to secure a just, true, and faithful appraisal of goods, and applies to invoices of merchandise sold to importers in Canada, but not to goods for entry under the preferential tariff until otherwise ordered, nor to goods the value of which for duty has been fixed and determined under the customs act of Canada.

The certificate is to be signed by a partner, official, or employee of the exporter having a knowledge of the facts certified to and to be written, printed, or stamped on the face or back of the invoice.*

FORM 6.

The declaration Form 6 (hereinafter set forth) is prescribed to be made by the foreign owner or exporter of any goods shipped to Canada on consignment, before the collector or the mayor or other chief municipal officer at the place in the United Kingdom, or other place in Her Majesty's possession abroad from whence the goods are shipped, or before a notary public; and at any other place before any British or other consul, duly accredited by any established government and resident in the country from whence the said goods are exported to Canada.

The declaration (Form 6) may be written, printed, or stamped on the invoice or annexed thereto and applies to goods shipped on consignment for entry under the preferential tariff as well as to consigned goods shipped for entry under the general tariff of Canada.

PREFERENTIAL CERTIFICATES AND INVOICES.

This summary does not contain forms of certificates or instructions relating to invoices for entry under the British preferential tariff of Canada, a memorandum having been issued by the department on July 14, 1898, giving full information on this subject.

PRESCRIBED FORMS OF CERTIFICATES OR DECLARATIONS ON INVOICES.

(For entry under the general tariff of Canada.)

Form "J."

Form of certificate prescribed for invoices of merchandise sold to importers in Canada and exported thereto, to be signed by a partner, official, or employee of the exporter having a knowledge of the facts certified to and to be written, printed, or stamped on the face or back of the invoice, viz.

This invoice is true and correct; and where there is a difference between any of the prices shown therein and the ordinary credit prices at which the same articles are now sold bona fide by the exporter in like quantity and condition at this place for consumption in this country the latter prices are shown on the margin or elsewhere on such invoice.

Dated at _____, _____ 18__

Exporter.

* N. B.—A different certificate or declaration is required to be made for goods shipped to Canada on consignment. See Form 6.

Form 6.—Declaration prescribed to be made by the foreign owner or exporter of any goods shipped to Canada on consignment, before the collector or the mayor or other chief municipal officer at the place in the United Kingdom, or other place in Her Majesty's possessions abroad from whence the goods are shipped, or before a notary public; and at any other place before any British or other consul, duly accredited by any established government and resident in the country from whence the said goods are exported to Canada.

¹ Name of party subscribing to this declaration.

² City, or town, and country.

³ A member of the firm of —, giving the name of the firm when the shipment is made by a firm, or an officer, director or manager of —, giving the name of the corporation when the shipment is made by a corporation.

⁴ Name of consignee.

I, —, ¹ of —, ² do solemnly and truly declare that I am —, ³ the owner of the goods shipped on consignment to —, ⁴ at — in Canada, and described in the annexed invoice; that the said is a complete and true invoice of all the goods included in this shipment; that the said goods are properly described in the said invoice; that there is included and specified in the said invoice the true value of all cartons, cases, crates, boxes, and coverings of any kind, and all charges and expenses incident to placing the said goods in condition packed ready for shipment to Canada; if prior to their shipment to Canada the said goods or any of them have been sold to any person or firm or corporation in Canada, that there is truly set forth in the said invoice the price or amount actually charged or intended to be charged to such person or firm or corporation for the said goods as in condition packed ready for shipment at the place whence bona fide exported and consigned to the importer in Canada (after deducting only such freight from place of shipment direct to Canada and Canadian import duties and charges as have been included in the price of the goods sold as aforesaid); if prior to their shipment to Canada the said goods, or any of them, have not been sold to any person or firm or corporation in Canada, that the said invoice contains a just and faithful valuation of such goods at their fair market value when sold for home consumption in the principal markets of the country whence the same are exported directly to Canada, and that such fair market value is the price at which the said goods are freely offered for sale in like quantity and condition by me or by dealers therein to purchasers in said markets in the ordinary course of trade at the usual credit without any discount or deduction for cash, or on account of any drawback or bounty, or on account of any royalty actually payable thereon, or payable thereon when sold for home consumption, but not payable when exported, or on account of the exportation thereof, or any special consideration whatever; or that if the value for duty of any goods as stated in this invoice is other than the value thereof as above specified, such value for duty has, to the best of my knowledge and belief, been fixed and determined under the authority of the customs act at the value stated in said invoice; and that no different invoice or account thereof has been or will be furnished to anyone by me or on my behalf.

Dated before me at — this — day of —, 18 .

WOOD INDUSTRY IN NEW BRUNSWICK.

The trans-Atlantic lumber shipments from the Province of New Brunswick fell off from 494,000,000 feet in 1874 to 412,000,000 feet in 1898. The shipments of the past twelve months are still larger, however, than those of 1896, when they were but 386,000,000, or those of any previous year since 1889. In 1891, the trans-Atlantic shipments from this Province amounted to only 253,000,000 feet.

Nova Scotian shipments have also fallen off from 185,000,000 feet to 148,000,000 feet, but they are also larger than in any previous year of which the record is given.

The three northern ports of New Brunswick—Miramichi, Campbellton, and Dalhousie—all show increases in 1898; while at all other ports in the Province, there has been a falling off. As compared with 1897, the showing by ports is as follows:

Ports.	1898.	1897.
	<i>Sup. feet.</i>	<i>Sup. feet.</i>
St. John.....	184,954,343	244,399,066
Miramichi.....	113,167,105	101,719,077
Moncton and outports.....	29,549,783	58,187,304
Dalhousie.....	28,230,583	24,185,011
Campbellton	16,249,172	14,960,267
Shediac	11,740,280	14,980,765
Sackville and Bale Verte.....	8,972,658	14,419,134
Richibucto and Buctouche.....	7,455,890	7,489,438
Bathurst	12,159,857	13,864,133

The winter of 1897-98 was a good one for procuring logs, and the spring was favorable for getting them to market. The present logging season, until the middle of December, has been unusually mild, with continuous rains, and operators report the ground soft and other conditions for logging worse than for many years. The indications are for only a moderate supply.

A feature of this year's business is the large decrease in the exports from almost every New Brunswick and Nova Scotian port, showing a reduced shipment from the former Province of 82,000,000 superficial feet and from the latter of 37,000,000 superficial feet.

It is said that the prospects of improved markets in the United States, the West Indies, and South America are most promising, and if these consume even a limited additional quantity of the smaller sizes (such as they usually take) it will to a large extent curtail consignments to Europe and have a beneficial effect on prices.

The stock of merchantable spruce deals and logs wintering at this district is said to be above the average, although 23,000,000 superficial

feet less than last year. This, with the decreased production of this winter and prospects of improved business on this continent, will, no doubt, strengthen values. An innovation will also be made by which the horse will be pushed into the background. A large lumber dealer at St. John, New Brunswick, has given an order to a Chicago firm to furnish a machine for hauling logs. It may be termed an automatic railway, for the machine forms its own bed or road, over which it travels by means of cogged wheels. The cogs fasten in the ice and prevent slipping. It is stated that the machine is used in the Western lumber woods, and that it gives entire satisfaction. In some places, it is said, the machine is even used for hauling out cord wood. Large sleds loaded with logs are attached to the engine.

The first machine will be in operation in January, 1899.

GUSTAVE BEUTELSPACHER,

MONCTON, *December 30, 1898.*

Commercial Agent.

AMERICAN WOODS IN GERMANY.

The import of American woods has steadily increased, although American exporters try very little to comply with the wishes of the German importers. Owing to this cause, more especially in Hamburg, it is probable that business in all consignments from the United States of walnut and oak blocks, planks, and balks results in a loss. A great quantity of inferior walnut woods has reached Hamburg, which, in the judgment of experts, must be sold at a loss; whereas really good material would bring remunerative prices. It appears that for the last year or so, fashion has dictated the use of mahogany for furniture making, and therefore less walnut (American as well as Caucasian) is asked for; but this is not the sole cause of the decrease. It is rather, as above stated, the low quality of the larger portion of the imports.

Another fault of American exporters is their unreliability in the execution of orders. For instance, in the autumn of last year contracts were made for delivery in the spring of 1898, and these are now only partially executed, while the quality of the oak delivered is very inferior. There is a considerable field for American oak, under the following conditions:

(1) The assorting must be done more carefully. Woods that are coarse and hard must be described as such in the tenders for supply. Oak woods that are described as first and second qualities must have no splits and be free from the woodworm. The complaint in this respect is general, and American oak in many cases, can not be used.

(2) The boards and balks must be more carefully (*i. e.*, slowly) dried, thus avoiding dry rot.

(3) Exporters must be more prompt in fulfilling their engagements.

(4) Sea freight should be kept down as low as possible throughout the year. This might be accomplished by a combination of exporters.

The woods can not stand a freight of more than 18 cents per 100 pounds to Bremen and 15 cents to Rotterdam. Higher freights prevent a larger import.

Hickory would be much more imported, if the exporters would adhere more to the wishes of the market. Split hickory for making spokes is hardly offered at all, although there is always a demand for it.

American cherry makes very slow headway. The beautiful quality of this wood should make it more popular; but the prices asked for it are high.

Red gum is certainly a less valuable wood; but, owing to its cheapness, the inquiry for it steadily increases. It is not advisable, however, to send trunks. Wood with the bark on soon decreases in value. It would be better for the mills to produce large widths for the export trade, because the sending of blocks will then not be necessary.

White gum is a wood that is liked as little here as in the United States. Whoever has used it once does not buy it again.

The consumption of white wood (poplar) grows steadily, as it is the most suitable material for many purposes, such as carriage making, construction of pianos, etc. Stout blocks of first-class quality are preferred. Small trunks are cut to much greater disadvantage in Germany than in the United States, because higher prices are paid here for large breadths without splits and knots; narrow-board material is obtained cheaper from the United States.

The low-class cottonwood has had a depressing effect on the prices of poplar. Cottonwood is taken in large lots, because people believe that it will serve the furniture makers as blind wood (backing) almost as well as white wood (poplar).

Maple in balks and blocks does not receive proper attention. In Germany, the white maple is liked. This color can be obtained by a careful treatment of the wood, and the effort will prove highly remunerative.

Pitch pine, yellow pine, and Carolina pine have a constant demand. It is highly advisable for United States exporters to take care in sorting. Pitch pine and Carolina pine with blue spunk are very difficult to sell.

Cypress wood is not inquired for in Germany as much as it

should be. One disadvantage of cypress wood is that it is so difficult to dry. It is suggested that this is caused by the trees being felled when the trunk is full of sap.

High rates of freight are charged by the railways in Germany for all kinds of American woods.* European woods are carried cheaper than non-European woods.

The following table will show the discrimination in rates of freight between European and non-European woods carried on German railways:

Price per 100 kilograms (220.46 pounds).

From Bremen to—	European woods, in quantities of 10,000 kilograms (22,046 pounds).		Non-European woods.			
			In quantities of 5,000 kilograms (11,023 pounds).		In quantities of 10,000 kilograms (22,046 pounds).	
	Marks.	Cents.	Marks.	Cents.	Marks.	Cents.
Aachen (Aix la Chapelle).....	1.23	29.2	1.97	46.8	1.78	42.3
Altenburg, Saxe-Altenburg.....	1.41	33.5	2.27	54	2.05	48.7
Berlin	1.14	27.1	1.82	43.3	1.65	39.2
Bielefeld .....	.66	15.7	1.02	24.2	.93	22.1
Brunswick .....	.67	15.9	1.04	24.7	.95	22.6
Cologne	1.10	26.1	1.76	41.8	1.59	37.8
Crefeld .....	.97	23	1.54	36.6	1.40	33.3
Cassel .....	.99	23.5	1.57	37.3	1.42	33.7
Dresden	1.58	37.6	2.56	50.9	2.31	54.9
Dortmund .....	.83	19.7	1.31	31.1	1.19	28.3
Elberfeld .....	.97	23	1.54	36.6	1.39	33
Essen-an-der-Ruhr .....	.88	20.9	1.39	33	1.26	29.9
Erlangen	1.86	44.2	3.06	72.8	2.73	64.9
Frankfort	1.54	36.6	2.49	59.2	2.25	53.5
Freiburg, in Bavaria.....	2.34	55.6	3.83	91.1	3.45	82.1
Fulda	1.22	29	1.96	46.6	1.77	42.1
Gera	1.44	34.2	2.32	55.2	2.10	49.9
Göttingen .....	.81	19.2	1.28	30.4	1.16	27.6
Halle-on-the-Saale.....	1.16	27.6	1.86	44.2	1.68	39.9
Hanover .....	.49	11.6	.74	17.6	.63	14.9
Karlsruhe	1.94	46.1	3.15	74.9	2.85	67.8
Leipzig	1.26	29.9	2.03	48.3	1.83	43.5
Mannheim	1.79	42.6	2.90	69	2.62	62.3
Mühlhausen, in Thuringia.....	1.05	24.9	1.67	39.7	1.51	35.9
Munchen Gladbach.....	1.04	24.7	1.66	39.5	1.51	35.9
Nuremberg	1.87	44.5	3.10	73.7	2.74	65.2
Nordhausen .....	.96	22.8	1.52	36.1	1.38	32.8

The freights charged on non-European woods average from 41 to 47 per cent higher than those on European woods. The longer the distance, the higher becomes this indirect tax. The difference is especially detrimental to American walnut and hickory, while American oak can be sent to South Germany only over the water ways. Some remedy for these conditions should be sought.

LOUIS LANGE, Jr.,
Consul.

BREMEN, December 20, 1898.

* See CONSULAR REPORTS No. 210 (March, 1898), p. 337.

AMERICAN FRUIT AND LUMBER IN FRANCE.

Consul Thackara, of Havre, writes as follows to a chamber of commerce* in California, under date of December 16, 1898:

When one considers that organized effort to introduce our goods abroad is still in its infancy, it is surprising to know that the exports from the United States last year amounted to almost \$100,000,000 a month. The short crop of cereals in Europe, necessitating large importations of all kinds of grain, had much to do with swelling the amount; but still the exports of other products reached an imposing total.

To introduce goods into foreign markets requires as much skill and energy as it does to exploit them at home. Our people are beginning to realize that the same amount of money wisely expended in bringing American goods to the attention of foreign consumers as is spent annually in sending commercial travelers through our own country, will in almost every case secure outlets abroad for our surplus products. I am of the opinion that if your chamber would send an intelligent representative to Europe, one who can speak at least the French language—French and German would be better—to visit different commercial centers and investigate the existing economic conditions, he would be able to make business connections which would be highly remunerative.

I have had several interviews with some of the principal importers in Havre, and they tell me that there is not much chance of a market for American raisins, as the latter can not compete with those from Spain, Greece, and Turkey, which can be placed on the French market at low prices. All these nations are allowed to import their goods into France under the minimum tariff, while the United States is not so favored. By the terms of the reciprocal commercial arrangement between the United States and France, all fruits were allowed to be imported into France under the minimum tariff except raisins, which have to pay the maximum tariff—a difference of 10 francs (\$1.93) per 100 kilograms (220.46 pounds).

I have carefully investigated the question of the possible introduction of American wines into France and have embodied the results of my labors in a letter which I recently wrote to a large wine association in the United States.†

In my opinion, there is an excellent opportunity to introduce

* To which a copy of Advance Sheets has been sent.

† See page 584, *post*.

dried and canned deciduous fruits and citrus fruits into France. Considerable trade is already being done with the United States, especially in chopped and evaporated apples and pears. There is always a demand for American dried apricots, if the prices are not too high. Those raised in this country are seldom dried and are not in sufficient quantities to supply the demand.

The demand for prunes in France depends almost entirely upon the native crop. This season, the large sizes are being imported into France from the United States, while the smaller sizes are being exported from this country. A brisk trade is being carried on in the large sizes, especially in Santa Clara prunes. There was a fair demand for Oregon prunes, but the preparation of the latter leaves much to be desired. In some cases, the fruit arrived in a fermented state.

There is also a demand for dried peaches, nectarines, and pears, canned apricots and peaches, and apricot pulp in tins. Canned fruits should always be shipped in water, without sugar, as the heavy French customs duties on sugar make the importation of sweetened canned fruits almost prohibitive.

The exportation of dried and other fruits from the United States to France is generally in the hands of the exporting houses of San Francisco, Chicago, and New York, with whom the merchants here have their dealings. Two very reliable firms in Havre, who do a very large business annually in American products, are Gabain Frères, 188 rue Victor Hugo, and William Mason, 29 rue de la Bourse, Havre, France. English is thoroughly understood by these concerns.

Havre is an important market for nearly every kind of lumber, although California redwood is almost entirely unknown.

In conversation with an American lumber broker of Havre, Mr. James N. Chrystie, 57 rue St. Quentin, he informs me that he has made several attempts to sell cargoes of this lumber for foreign account in France, but so far has been unsuccessful. Three difficulties stood in the way:

(1) The price wanted by the American exporter has always been a little higher than the French importers could afford to pay. Twelve pounds (\$58.39) per St. Petersburg standard (165 cubic feet)—say, \$29 per 1,000 square feet—is as much as the importer could offer this year c. i. f. Havre.

(2) The voyage from the Pacific being a long one, the terms—2 per cent discount for cash, payment on date of arrival (freight deducted)—were held out for by the French importer, the American exporters' terms being four months from date of bill of lading.

(3) The smallest vessel which could be chartered was of a capacity of about 60,000 square feet, and this seemed too much for a trial

shipment. Fifty thousand square feet would be ample, as the wood is not generally known.

If these difficulties could be surmounted, Mr. Chrystie is under the impression that a market for California redwood could be built up. The sizes wanted are 8 inches full in thickness (as wood of this thickness and above is admitted free of duty), 14 feet and upwards in length, and 12 inches and upwards in width—the wider the better. If the wood is 1 centimeter less than 8 inches in thickness, it most certainly will have to pay customs duties; so I say 8 inches full. It should be clear stuff.

The importations of fruit into France for the first nine months of 1897 and 1898 (taken from official custom-house statistics) were:

Description.	1897.		1898.	
	<i>Kilograms.</i>	<i>Pounds.</i>	<i>Kilograms.</i>	<i>Pounds.</i>
Fresh table fruits.....	58,782,900	129,592,781	56,627,900	124,841,868
Dried, evaporated, and canned fruits.....	11,008,600	24,269,560	16,143,700	35,590,401

The importation of cereals into France depends upon the native harvests. The crop of all kinds of grain in 1896-97 in France fell far below the average, necessitating the importation of vast quantities of wheat and other cereals; but this year's returns are the largest known in the history of France, with the exception of one year.

I attach a trade circular which I have gotten out for the benefit of American exporters:

POINTS FOR AMERICAN HOUSES DESIRING TO ESTABLISH TRADE RELATIONS IN FRANCE.

Correspond in French, otherwise your letters will receive but little attention.

Business on very limited scale may be established by correspondence. But it can neither be kept up nor increased by letter writing any more than it can at home.

If you send catalogues to France, have them printed in the French language, with prices in francs and weights, dimensions, and measurements in the metric system. State your terms, conditions, and discounts clearly and in full.

Do not expect to sell goods on banker's credit, or cash upon the delivery of documents. In France long credits are the rule, rather than the exception. Ninety days is the usual time given by foreign houses. A cash payment, in the French acceptance of the term, means payment before the last day of the month in which the goods are received.

To secure custom in France it is necessary to send competent commercial travelers, speaking the language, to visit and seek buyers in the principal centers of commerce and industry. This plan is adopted by English, German, and other houses in extending their foreign trade, and American firms must either follow their example or abandon all hope of success. Optical demonstration of the merits of an article is more effective than are written descriptions. Provide your travelers with a full line of samples, and when you fill an order see that the goods shipped are as good as the samples.

The fact must be borne in mind that more energy is required to introduce goods abroad than at home. But if American manufacturers would only give one-half the attention to pushing merchandise in Europe that they do in the United States, it is certain that they would be amply repaid. The firms that send commercial travelers to France or establish agencies in this and other European countries are the ones that succeed. The others get few returns. You must therefore decide at the start into which of these two categories you wish to enroll yourself.

PROSPECT FOR CALIFORNIA WINES IN FRANCE.

In reply to a Western wine association,* Consul Thackara, of Havre, on November 25, 1898, says:

I do not think there is any possibility of selling California wines in France. .

The vintage of 1897 has not been a short one. In the Medoe district, the crop has been about 30 per cent under the average; but for the entire country the yield, according to present estimates, has been about 6,000,000 hectoliters (158,460,000 gallons) above the average during the past ten years, experts placing it at 40,000,000 hectoliters (1,056,000,000 gallons).

France, however, notwithstanding her own large yield, imports immense quantities of wines for blending purposes from Spain, Portugal, Italy, Tunis, and her own province of Algeria. If any California wine were shipped to France, it would have to compete with the products of these and certain other countries; and this it would be impossible for the American product to do, owing, first, to the comparatively high rates of freight from the United States to France and, second, to the extreme cheapness of the European and African vintage.

The quantity of wine imported from other countries into France during 1896 was as follows:

Country of origin.	Quantity.	
	<i>Hectoliters.</i>	<i>Gallons.</i>
Spain	5,002,562	132,067,636
Italy	13,850	365,878
Portugal.....	194	5,122
Algeria	3,125,319	82,508,422
Tunis	87,486	2,309,630
Other countries.....	156,288	4,139,003
Total	8,395,708	221,646,691
Total value.....	<i>Francs.</i>	
	251,871,240	\$48,611,149

*Advance Sheets of report have been sent the association.

Therefore, the average price per gallon of wine imported into France is 22 cents. Spanish wines can be bought in France, freight and duty paid, at 25 cents per gallon. The Algerian wines come in duty free.

A merchant at Havre offers to sell me in large or small quantities a good Spanish wine of 11° at 34 francs per hectoliter (\$6.56 per 26.418 gallons), laid down in this city.

You would accordingly have to put your California wine on this market c. i. f. at, say, 30 francs per hectoliter (\$5.79 per 26.417 gallons); for it is presumed that a profit of at least 4 francs (77.2 cents) per hectoliter is made by the local dealers here.

Two distinct duties—the maximum and minimum—are levied by the French Government on foreign wines, as follows:

Wines exclusively the produce of the fermentation of fresh grapes.

Description.	Maximum.		Minimum.	
	Francs.	Cents.	Francs.	Cents.
Up to 11°, exclusive, i. e., up to 10.9° per alcoholic degree and per hectoliter (26.417 gallons) of liquid.....	1.20	23.16	0.70	13.51
Above 11°, inclusive, per alcoholic degree and per hectoliter of liquid for the first 11°, and 36 centimes (7 cents) for every additional degree.....	1.20	23.16	0.70	13.51

I understand that wines of the 1897 vintage are being quoted in California at 12 cents per gallon, or, say, \$7.20 per cask of 60 gallons. Adding the cost of the cask, which we will put at \$1, it is probable that California wine can be shipped at \$8.20 per cask, or, let us say, 42.50 francs per 2¼ hectoliters (\$8.20 per 59 gallons); so that, admitting that your wine contains, say, 11° of alcohol, and bearing in mind that American and Italian wines pay the maximum duty and Spanish wines the minimum, the total cost would be:

	Francs.
Cost of 1 barrel of wine (2¼ hectoliters) at San Francisco.....	42.50 = \$8.20
Freight from San Francisco to Havre or Bordeaux	31.85 = 6.14
Duty on 2¼ hectoliters at 11°.....	29.70 = 5.73
Various charges—cartage, stevedore, etc. (the minimum).....	1.20 = .23
Total cost of 1 barrel of wine laid down in France.....	105.25 = 20.30

It would therefore be impossible to deliver your wine in France, freight and duty paid, for less than 105.25 francs (\$20.30), while Spanish wines can be put on the market here at 30 francs per hectoliter, or 76.50 francs (\$14.76) per cask.*

You may argue that California wines are superior to the products

* NOTE BY CONSUL THACKARA.—Since this letter was written, the duties on wine and the method of applying the same have been changed, the duties being increased, in some cases, nearly 40 per cent. The Franco-Italian treaty, recently signed, permits the Italian wines to be imported under the minimum tariff.

of Spain; but Spanish, Italian, Algerian, and other wines give entire satisfaction to importers here, no wines being imported except for blending purposes.

I am always ready to do everything in my power to introduce American goods into France; but from the foregoing facts, it appears to me that it is not possible to introduce California wines into this country.

THE VINTAGE OF 1898 IN GERMANY.

This year's vintage in Germany will go on record as one of the poorest, both as to quantity and quality, of recent years. The main cause is to be sought in the very unfavorable state of the weather during the blossoming period of the vines. At the same time, the diseases of the vines spread to an alarming extent. On the average, hardly one-fifth to one-fourth of a crop has been gathered, and prices have consequently ruled high; but it is very doubtful whether they can be kept up, owing to the rather poor quality of this year's vintage.

In Rhenish-Hessen, early burgundies brought \$166.60 to \$202.30 per 1,200 liters (317 gallons) of must. According to the Oechsle system, the must gauged 70° to 80°.

The Portuguese grapes of the Upper Haardt hills were gathered the beginning of October. The average price paid was \$81 per 1,200 liters of must. On the Middle Haardt hills prices averaged \$90 per 1,200 liters of must, and on the Lower Haardt \$80.

On the Nahe, the must of early burgundies gauged 75° to 85°, with an acidity of 7 to 8 per cent. Early burgundies brought \$128 and Portuguese \$85 per 1,200 liters of must.

The gathering of the red-wine grapes of the Middle Rhine dragged along to the end of October. The result was extremely meager. The must gauged 68° to 90°.

The general gathering of the grapes began the end of October and was accomplished by the middle of November.

In Rhenish-Hessen, the crop averaged one-tenth to one-third of a normal year, according to the location of the vineyards. Prices ranged from \$95 to \$202 per 1,200 liters.

In the Rheingau, the grapes were not juicy, and it took 39 to 40 cwts. to produce 1,200 liters of must. Vineyards of 12 to 14 acres produced only 600 to 900 liters of must.

In the valley of the Middle Rhine, the result was no better. The must gauged 60° to 75°, with an acidity of 12 to 15 per cent.

The vintage on the Upper Moselle resulted in a fourth of that of a normal year. The quality will probably be similar to that of 1896.

Price of must averaged \$114 per 1,200 liters. On the Middle Moselle, prices averaged \$214 to \$285 per 1,000 liters. Must gauged 70° to 80°. On the Lower Moselle, prices ranged higher than last year, notwithstanding the poorer quality. The average price was \$123 per 1,000 liters. Riesling averaged \$146 per 1,000 liters (264 gallons).

In the valley of the Nahe, the quantity was very small, and, judging by the must, the quality promises to be similar to that of 1896. Prices paid ranged from \$71 to \$119 per 1,200 liters.

The vintage of the white-wine grapes of the Haardt hills was rather unsatisfactory. Prices ranged from \$78 to \$202 per 1,200 liters, according to quality and location.

In the other wine-growing provinces of the German Empire—Baden, Franconia, Wurttemberg, and Alsace-Lorraine—this year's vintage was equally disappointing.

WALTER SCHUMANN,
Consul.

MAINZ, *December 13, 1898.*

UNITED STATES IMPORTS AT BRISTOL.

In his annual report (to appear in full in Commercial Relations, 1897-98), Consul Lathrop, of Bristol, says:

CORN.

Bristol is a very large importer of corn, all of which, as elsewhere in England, is used as feeding stuff. The green corn in the ear is no longer a novelty in London, and its use may be expected to develop. The consumption of the canned corn also develops slowly, but the use of corn meal as human food makes little progress. In view of our preponderating interest in this important cereal, it would perhaps be worth while for our Government to continue in England the efforts from time to time made on the Continent, to teach the people how to eat it. This could be done with a minimum of expense, I think, by making some arrangement with gas companies who keep constantly in the field a force of exhibitors and trained cooks and give exhibitions in the principal towns of gas cooking apparatus. It is possible that an arrangement might be made by which these exhibitions could be utilized for the preparation of dishes made from corn meal and the enlightenment of the public as to its qualities. The plan is perhaps worth the consideration of the States in the corn belt. I am not certain as to whether an economical arrangement could be effected with the gas companies, but this information can easily be secured if anybody thinks my suggestion

worth investigation. A point against corn in England would be the absence in many homes of those quick-baking and excellent ovens necessary to secure the most palatable forms of the many dishes prepared from corn meal.

BARLEY.

Bristol is the largest importer of barley of any port in the United Kingdom, the annual amount being about equal to that of London and Liverpool taken together. The great breweries of the west of England and the Midlands turn principally to Bristol for their supplies of malting and brewing barleys, and for fine parcels, they pay a very high relative price. The United Kingdom imports about 20,000,000 cwts. (49,000,000 bushels) every year, of which about one-fifth comes to Bristol; but the mass of this great importation is, of course, the ordinary cheap feeding barley. Asiatic Turkey, Roumania, and the United States supply the bulk of the higher grades, the larger part of our contribution coming from the Pacific coast by sea. The tendency of the California barley to chip in the envelope of the kernel is still complained of by malsters. The Northwestern States are sending some excellent brewing barley; but in a certain proportion of the parcels may be found a preventable fault—a fault that in some cases has been known to reduce values as much as 8 to 10 cents per bushel. That the seed may have a neat and uniform appearance, the thrashing machine is set somewhat too close, with the result that the skin of the kernel is cut at each end, thus permitting access of air and moisture to the interior, with the result of germination en route or uncertain and irregular action on the malting floor. In suitable localities, our farmers would do well to pay great attention to this English demand for high-class barleys, for excellent prices are always obtainable for fine samples.

BACON.

The remarks I made last year* have led to a considerable correspondence with farmers, who had noted with regret and disappointment the relatively low prices realized in England for our bacon; and I have pointed out to them with minuteness the reasons for the discrimination and the way to correct it, and it is possible that some concerted effort will be made.

The United Kingdom imported, in 1897, 5,000,000 cwts. (560,000,000 pounds) of bacon, of which 1,000,000 cwts. came from Denmark and 3,500,000 cwts. from the United States. For our great share in this enormous business, we were content to accept from \$4 to \$6 per

* See *Commercial Relations, 1896-97*, vol. ii.

cwt. less than was paid for English, Danish, or Canadian bacon. This great loss was due to the inferior quality of our product and unsuitability to consumer's taste, and it seems to me that it would be worth somebody's while to cater specially for the British market. It will not pay the farmer in the corn belt to do this; it will not pay the great packer, who throws his surplus across the ocean to bring what it can; but why it will not pay in Wisconsin or Minnesota or New York or New England, I can not understand. If Canada can get \$15 per cwt., why should not we, instead of \$8 or \$9? They only ship 300,000 cwts. per year from Canada, but they get top prices for that. Let us see how. In the first place, their packers demand a hog that costs more to produce than ours; so they pay more for it, paying a premium on the best—say \$4.75 (per 100 pounds) for a pig under 160 pounds, and \$4 for one over that weight. These hogs are fed mostly on pease, which make as firm and fat flesh as the usual English food, barley meal or miller's offal; and even a small ration of corn is objected to. Canadian packers regret that the Canadian Government has put corn on the free list, as they say that the temptation to feed a small ration of corn is now almost irresistible, and that the result is deterioration in the bacon. With the right hog once secured, the basis of success is reached; and it is astounding how soon, in Canada and Denmark, the proper hog appears after the establishment of the packing house.

The next matter of importance is the mode of cutting up, and this is not so simple as it seems. I know of one Canadian house, whose brand is now well and firmly established in England, who made mistakes until an expert crossed the water and showed them how to cut a "Wiltshire singed side."

The curing presents no difficulty; there are no mysteries about that, but there comes finally the vital consideration of proper English connections.

The proper hog, the correct cut, and the right consignee—these are the essentials of a renumerative trade.

CATTLE.

Bristol is practically the only port in the Kingdom, besides London, Liverpool, and Glasgow, importing United States and Canadian cattle. It has made the most perfect and modern arrangements for the accommodation of this trade, which may be expected to advance steadily, but without the great development the business has attained in the above-named ports. The west of England is a grazing country, fattening numbers of fine cattle, and the market for imported beef is necessarily limited. No better evidence of the quality and

condition of our American beef is needed than the fact that retail butchers in the heart of a fine beef-making country (to avoid encountering an ignorant prejudice and to gain a slightly higher price) sell most of the American beef as English. It passes without comment or question, and satisfies palates accustomed to the best. Expert local opinion here is to the effect that United States cattle are superior in quality to those from Canada, taking the average run of the season; and the difference is attributed to climate.

IRON MANUFACTURES.

The United States as an exporter and manufacturer of iron, steel, and machinery has attracted great attention during the past two years throughout the whole of Europe; and it is expected, and believed even by our competitors, that we are going to become large exporters. The farmers in this neighborhood are almost unanimous in preferring our agricultural machinery; and the handicraftsmen in this city, where they have used our tools, find them superior in lightness, in finish, and in ingenious adaptation to the work performed by them. We have secured a firm market in the west of England for barbed wire and for wire nails. It is desirable to note one or two points in connection with the latter commodities.

The shipment of wire nails to this district is comparatively new, and has been inaugurated without those difficulties and disappointments which often attend the opening of new markets. The Birmingham gauge is almost exclusively in use here, and in one case that I know of, the nails did not conform to the order; but this I believe to have been only a mistake, and not an indication that we are making for the English market with a wrong gauge. One of our exporting houses lost the custom of a great Bristol firm because it was too unyielding in its demands that remittances should be made through certain channels and in certain ways. Another of our firms secured the business, and I mention the circumstance only to show that in dealing with first-class people it may not always be wise, with new business, to be too rigidly adherent to fixed rules.

There is considerable (and, from personal inspection, I may say well-founded) complaint about the quality of the jute bags in which our nails are packed. American nails stocked with English and German will quickly betray their origin by the holes in the bags. There is some waste of nails in transit through this fault, and the bags should be stronger.

AMERICAN TRADE AND BRITISH TRADE PUBLICATIONS.

Under date of January 7, 1899, Consul Halstead, of Birmingham, reports:

The cordial reception which has been given a new trade publication here is one of the many indications that British merchants and manufacturers are aroused to the dangers of American competition. The news columns of both trade and daily papers are filled with facts about American trade, and in the editorial columns constant and serious attention is given to all American commercial information. I feel certain that no one newspaper in America devotes so many columns to American consular reports as does this new British trade paper, and they are nowhere handled with greater intelligence. In this week's issue, America gets fully twelve 900-word columns, about one-half taken from the reports of American consuls.

Mr. Halstead adds, under date of January 13:

The United States CONSULAR REPORTS, I think, are proving of greater service to Great Britain to-day than they are to America, because the British trade publications are giving more importance to them than is given at home and are quoting them more fully.

The clippings sent by Mr. Halstead comprise reports by himself; by Consul Fleming, of Edinburgh; by Consul Covert, of Lyons, etc.* The other extracts are given below:

THE IRON-ORE SUPPLIES OF GREAT BRITAIN.

The question of the hour in the iron and steel trades of this country is not that of the opening up of new markets, nor that of the cost of labor, nor that of the success of foreign competition, important and pressing though these matters be, but it is the problem of how and whence the British blast furnaces are to secure adequate supplies of ore at a reasonably cheap cost. The available supplies of home ores have been falling off from year to year for at least fifteen years past, until to-day only the Cleveland mines and the West Cumberland mines are left as sources of supply that can be depended on for large future requisitions. The ores of South Staffordshire, South and West Yorkshire, South Wales, Shropshire, and Scotland, which were formerly the mainstay of the British iron industry, are now so far exhausted that they are not likely to be of much account in the future. Not only so, but, strange though it may appear, the ores of these districts at our own doors can not compete in cost with the ores that we import from Bilbao, 1,000 miles or more from our shores, or from Swedish Lapland, more than 1,600 miles distant. We have now drawn upon the Bilbao ores to such an extent that they are nearly exhausted, and in the future we must depend upon ores imported from other and more remote parts of Spain or from mines situated within the Arctic circle, and only capable of being worked during six or seven months of the year.

* See CONSULAR REPORTS No. 271 (February, 1899), pp. 235, 260, 277, 342.

WANTED, MORE DEPRECIATION.

In the coal and iron industries, it often takes a long time to gain experience or adopt a needful change. One of the matters in which we have hitherto been slow to act is the establishment of an adequate depreciation fund. This is especially true of the iron and steel industries, where but little provision has hitherto been made for overtaking the United States and other countries in their reconstruction of works and plant. Some American firms are understood to provide a depreciation fund sufficient for the reconstruction of their entire plant every ten or twelve years. In British experience, it is probably a rare thing to find similar provisions made more often than twenty-five or even thirty years. Speaking generally, the usual depreciation fund for the wear and tear of machinery is not sufficiently large. It seems to be assumed that it is enough to renew a machine when it is practically worn out. They manage these things better in the United States, where a machine is consigned to the scrap heap when it is not the best of its kind—or, in other words, when it has been superseded in the most advanced practice by a better and more economical design. This has enabled our American cousins to get well ahead of us in many things for the moment. The present spurt in the mechanical trades will put them in funds, and it is to be hoped that they will take care when their profits are being divided, to set aside a sufficient percentage for the purposes of renewal and depreciation. That way safety lies.

CANADIAN STEEL-RAIL PURCHASES.

The past two years have witnessed a revival in railway construction in Canada. Most of the rails required were formerly purchased in the United Kingdom, but now they are obtained largely in the United States. In 1896, the export of rails to Canada was so small as not to be separately mentioned in the United States export statistics. In the first nine months of 1897, however, 36,839 tons were sent across the border; and in 1898, in the same period, 80,349 tons, of the value of \$1,483,388. The total export of rails from the United States from January to September, 1896, was 53,841 tons; in 1897, it had increased to 88,573 tons, and in 1898 to 222,973 tons. This shows that the Americans must be finding markets for rails in other countries besides Canada. Japan, for instance, up to the end of September, 1898, took 42,417 tons, as compared with 27,466 in 1897. In Canada, there is no duty on steel rails above 45 pounds weight to the yard for use on the regular railways. Consequently, the question of the preferential tariff does not come into consideration. Most of the rolling mills are on the Great Lakes, and the cost of shipment is probably less than from the United Kingdom. At the same time, however, there must be some other reason to account for the diversion in the trade which has taken place. Canada imported 10,906 tons of rails from Great Britain in the first ten months of 1897, but in the same period this year, the quantity had fallen to 5,858 tons. It may be mentioned that, in addition to steel rails, there are being brought into the Dominion from the United States large quantities of other railway material for use in bridge construction and in making rolling stock. The matter is one which seems to demand the careful attention of manufacturers in the United Kingdom.

SPANISH TRADE IN THE PHILIPPINES.

The loss of these colonies, says a well-informed correspondent of the *Frankfurter Zeitung*, will not be very damaging to the trade of Spain, seeing that the exports to the Philippines last year amounted to 38,000,000 pesetas (\$7,334,000), whilst Spain took goods for 23,000,000 pesetas (\$4,439,000) only. These figures represent 2.84 and 2.55 per cent of the total imports and exports of the islands, respectively. The principal products of the Philippines are hemp, sugar, coffee,

copra, tobacco, cigars, and indigo. Gold is to be found in Luzon, and Cebu produces 60,000 tons of coal annually. Fully four-fifths of the total trade is absorbed by Manila, whose trade is estimated at \$36,000,000.

AGRICULTURAL MACHINERY FOR PERU.

In a report from Cuzco (Peru), the German consul mentions that there exists in Peru a good demand for agricultural machinery suitable for small concerns in the interior of that country. These machines, he continues, have to be arranged in small sections in order to enable them to be made up in packages not over 75 kilograms (165 pounds English) for transportation on mules' backs. American manufacturers, as a rule, say in their lists whether the respective machines are suitable for mule transportation or not, and give exact weights of the different sections. This is a point of great importance, and can not be sufficiently impressed upon manufacturers' minds.

AMERICAN ROOFING SLATES IN LONDON.

The Engineering and Mining Journal has recently been making careful inquiries into the conditions under which American and Welsh roofing slates can be delivered to London, and, as a result, declares that the American product can be supplied in London at a price 9s. less per thousand than that from the Welsh quarries.

AMERICAN COMMERCE VIEWED FROM THE GERMAN STANDPOINT.

The specter of American competition does not leave the German iron manufacturers and the German stock exchanges long at rest. The effect produced here by the announcement that American piping had been offered in the Rhine-Westphalian iron district at prices that the German producers could not meet was startling, and now a similar story can be told in regard to American bar iron. The Frankfurter Zeitung in its latest stock-market report says, in recounting the bearish factors affecting the market:

"There was also talk to the effect that offers of American bar iron had been made in Germany underbidding German prices. Thus the attention of the bourse was again called to the danger of American competition for our iron industry. We shall have to reckon with the fact that American iron, after having already found an entrance into England and Holland, will also push its way into Germany, despite the barrier of a high duty, especially as the American iron industry is on a great boom since the war and the iron works there are being greatly enlarged. As German producers are holding their prices considerably above the world market prices, there is a danger in the threatening American competition which can not be overestimated. Our iron works should adopt measures of defense against it in good time."

A GERMAN PRINTER'S VIEW OF AMERICAN PRINTING OFFICES.

The Typographische Jahrbucher publishes the following report on printing offices in the United States, supplied by Mr. Gustav Jahn, a practical printer and representative of the well-known firm of Koenig & Bauer, of Berlin, printing-machine manufacturers and inventors of the "rotary press."

Mr. Jahn traveled all over the States and visited a large number of the most important printing offices in quest of information on improvements and progress in the printing and graphic arts, and these are some of the observations made by him during his travels:

"In no country," says Mr. Jahn, "does the value and capacity of a printing press receive such careful consideration as in America; and nowhere is the division of labor so carefully defined as there. As a result, one must seek the highest achievements

in press building in that country. He is in error, however, who thinks that the reports as to the rapidity of presses that are said to have attained the 3,000 mark should be accepted as truth.

"Stop-cylinder presses, which are only used over there for the most exact color and tabular work, reached, from my observation, but 1,000 impressions per hour. It must be said, however, that these presses are in the great minority; and I do not think I underestimate when I assert that the number of these does not exceed 5 to 7 per cent of the entire number of machines of all classes in use.

"Two-revolution presses, with front delivery, are everywhere preferred.

"All earlier efforts of the manufacturers to bring upon the market a press with front delivery that will lay the printed side up (the kind so much desired by us) has had to be given up because lacking the sympathy of press owners and pressmen. In the last two years, thanks to the invention by Cottrell & Sons of a device for preventing soiling, the so-called perfecting press, whose output is from 1,250 to 1,700 impressions per hour, has been introduced, and is now found in almost every office. As is well known, this machine is manufactured by Koenig & Bauer, who have improved it to the extent of providing an attachment for printing from the web. In this connection, it may be well to state that an automatic paper feeder costs £300 (about \$1,500), while the apparatus for printing from the web costs £150 (about \$750). Unfortunately, the excellence of this press is not generally known among us, while in the New World it is accepted as of tried worth.

"Two-color presses do not begin to compare with our own (Koenig & Bauer's); what I saw of them I can only describe as exceedingly defective, in which opinion I was confirmed by the leading printers.

"What surprises one upon first entering the press room is the entire lack of lock-up tables and the presence of great racks for locked forms. After several experiments, I have found that on the average, twenty forms can be fitted upon each press; the chases themselves are cheaper than with us, largely because they are not forged, but manufactured as a standard article out of wrought iron electrically welded by the well-known firm of F. Wesel Manufacturing Company. (As is well known, American press manufacturers charge extra for chases and lock-up tables.) The form is closed in the composing room, and arrives corrected and all ready for the press. This explains why the pressman, when he has received his form already closed and corrected and is not, as here, under the necessity of searching for hours for lock-up materials, can accomplish more with his press than a pressman in Germany can hope to do.

"As to the counting, mixing of inks, etc., the pressman does not need to trouble himself. He is to watch only his impressions and his press, which he does with great conscientiousness, for he well knows that if he does not get the right results, behind him are standing three or four of the unemployed.

"Upon the type form itself the greatest care is lavished, on which account one must look at American printed matter with a lynx eye to find defective letters. Whether it is a book form or a job form or a form of the finest cuts, the planer with its rubber or leather surface is always used, and even the hammer is capped with leather."

MANCHESTER EXPORTS TO THE UNITED STATES.

I inclose herewith separate tables of the exports of cotton yarn (in pounds) and cotton velvets, cords, and fustians (in yards) from this district to the United States for the years 1897 and 1898, shipments recorded monthly, which I hope will be of interest to a large class of our manufacturers and merchants.

Cotton velvets, cords, and fustians exported to the United States during 1897 and 1898.

Month.	1897.	1898.
	<i>Yards.</i>	<i>Yards.</i>
January.....	858,346	512,617½
February.....	1,124,380½	550,289¾
March.....	2,284,736¼	574,088½
April.....	6,225,857	739,576½
May.....	3,405,123½	551,508
June.....	4,773,247	491,419
July.....	714,819¾	765,292¾
August.....	125,018¾	748,943½
September.....	340,915½	955,507½
October.....	518,409	793,294
November.....	389,543¾	805,481¼
December.....	554,404½	750,025
Total.....	21,314,801½	8,148,043

Exports of cotton yarn to the United States during the years 1897 and 1898.

Month.	1897.	1898.
	<i>Pounds.</i>	<i>Pounds.</i>
January.....	97,263	123,702
February.....	92,269¾	172,721½
March.....	146,384¼	230,461½
April.....	254,461¾	183,536½
May.....	130,888¾	154,089
June.....	122,596	81,675½
July.....	667,244½	116,230¾
August.....	36,103¾	118,148
September.....	46,795	129,857¾
October.....	81,001	103,234
November.....	85,888¼	132,240
December.....	127,809¼	149,186¾
Total.....	1,288,405¾	1,695,083¾

WILLIAM F. GRINNELL,
Consul.

MANCHESTER, December 31, 1898.

UNITED STATES GOODS IN DENMARK.

RUBBER SHOES AND BOOTS.

The climate of Denmark has changed completely in the last few years. Severe winters are now the exception; in fact, that of 1897-98 was so mild that considerable quantities of ice had to be imported from Norway, and this season has so far also proved mild. On the other hand, the weather is very rainy and damp, and everybody wears rubber shoes imported from Russia and Sweden. There is no reason why American manufacturers should not secure a large share of this trade, as their goods are well finished and elegantly shaped.

The Danish foot is, however, large, and the sizes most in demand would run from 6 to 9 for ladies and from 9 to 13 for gentlemen. Manufacturers should correspond with "Columbia," 4 Vestervoldgade, Copenhagen. I have seen American rubber shoes and boots there, and from conversations I have had with the manager, Mr. I. A. Lange, I think the prospects for introducing American manufactures are excellent.

HORSES.

In continuation of report dated September 15, 1897, and printed in CONSULAR REPORTS No. 206 (November, 1897), page 392, I have to report that the royal Danish "Remonte Kommission" has recently bought, as an experiment, six American saddle horses for the Royal Danish Hussars; and from conversations I have had with the officers, I understand that they are well pleased with the animals, though they say that the horses are apparently more adapted for trotting than galloping.

If the horses prove satisfactory and the prices in the future are acceptable, the "Remonte Kommission" is of the opinion that it will continue to buy, and thus open a market in Denmark for American saddle horses.

WHITE-OAK STAVES.

Having heard, some three years ago, that the supplies of oak staves from Hungary, Russia, and Sweden were not equal to the demand, I called Danish importers' attention to American staves, and I have to report that the trade in our white-oak staves is quite considerable, large quantities having been landed here lately, especially from New Orleans.

Copenhagen, with its excellent free port, is a good distributing point for Norway, Sweden, and the Baltic.

The staves run from 16 inches to 8 feet. Offers should be made c. i. f. Copenhagen, draft in dollars or pounds sterling, at thirty days' sight on Copenhagen. Manufacturers should correspond with L. Jacobsen, Wildersplads, Copenhagen.

COPENHAGEN, *January 21, 1899.*

JULES BLOM,
Vice and Deputy Consul.

BALING AMERICAN COTTON.

This consulate has been requested to report public opinion of the new system of baling American cotton, called the "Lowry bale."

As there are no cotton mills in my consular district, I, through the good offices of the Barmen Chamber of Commerce, had the matter referred to the directors of some of the largest cotton mills in Germany, and the information so obtained may be interesting to the entire American cotton industry.

The reports criticise in general the former method of baling American cotton. It is a well-known fact that the old system is very unsatisfactory; the bales weigh from 400 to 500 pounds, and are of irregular size and difficult to stow away in railroad cars and ships. As a consequence, the packing or covering suffers greatly and the cotton reaches Europe in inferior condition.

It has been recommended to pack American cotton in a style similar to the cotton received from the East Indies, which comes in bales equally long and wide, covered with thick Indian hemp and with a number of iron bands. All efforts made in the direction of introducing a system by which bales of a somewhat uniform appearance could be obtained have failed to prove successful, it being claimed that, in order to reach this end, the machinery now in use would have to be replaced by entirely new apparatus, which would incur immense cost.

A few years ago, an American company brought into the market "round bales." These bales are made by winding the cotton, as soon as it leaves the gin, under high pressure into cylinders of 36 to 40 inches in length. These bales have no iron bands, but are sewed into thick Indian hemp, which is only 1 per cent of the weight of the cotton, whereas formerly the packing weighed 6 per cent. The bales packed according to this system reached Europe in good condition, the volume being considerably smaller, and the cotton being protected from dirt and moisture. In working up this cotton in the spinning mills, however, it has been noticed that the fiber sticks together too much, which injury seems to be due to the irregularity of

pressure, the density being too great in the center of the bale. It is claimed that this trouble is thoroughly overcome by the Lowry system, and some of the leading cotton consumers look favorably upon the new method. If it proves to have the advantages claimed, they will gladly accept it in preference to the square bale.

MAX BOUCHSEIN,

BARMEN, *January 13, 1899.*

Consul.

ELECTRIC RAILWAYS IN GERMANY.

I glean from the last number of the *Electrotechnische Zeitung* the following statistics:

Up to the end of the year 1891, the number of cities in the German Empire enjoying the advantages of electric street railways was three; up to the end of 1892, five; 1893, eleven; 1894, nineteen; 1895, thirty-two; 1896, forty-four; 1897, sixty-one; and on the 1st of September, 1898, no less than sixty-eight. In thirty-five other cities or districts, railways are in the course of construction or finally determined upon. The entire length of electric lines in operation in Germany on September 1, 1898, was 888 miles, and the total trackage was 1,205 miles. The number of motor cars was 3,190, and the number of trailers 2,128. The length of the new lines in course of construction or about to be begun at that date was 677 miles, and their total trackage 830 miles.

Most of the large industrial cities in Westphalia and the Rhine Province are connected by a network of electric roads, which serve not only for passengers, but for freight traffic.

The electric street railway of Hanover was built under the supervision and direction of an American from Philadelphia, and was opened for business on May 1, 1892. It was one of the first electric lines inaugurated in Germany, and is now one of the best systems in existence. The cars are modeled after our American ones, and the tracks are of heavy steel, laid on a substantial foundation of concrete. The fare for a course of, say, 2 miles within the city limits is 10 pfennigs, or less than $2\frac{1}{2}$ cents of our money. Universal transfers are granted. The speed is about 8 miles per hour, and the cars run smoothly and with but little noise. Within the mile circuit and upon some of the principal streets extending to the city limits, the cars are run on the accumulator system; but when the outskirts are reached, the accumulators are released from service and the cars are run by overhead trolley. The lines extend, on almost every road, miles into the surrounding country. The trackage of the Hanover

Electric Railway now amounts to over 105 miles. The equipment consists of 41 overhead-trolley cars, 161 accumulator and trolley cars combined, 167 trailers, 20 locomotives, 4 sprinklers, and 24 freight cars. There are six power stations, four of which furnish, in addition to power for the cars, electric light for streets and roads. The motor cars are from 17 to 34 horsepower, and the locomotives 50 horsepower.

W. K. ANDERSON,
Consul.

HANOVER, *January 13, 1899.*

AUTO-MOTOR FREIGHT WAGONS AND FREIGHT RATES IN ENGLAND.

The report that a newly organized American company is manufacturing auto-motor freight road wagons capable of carrying 8 tons has been received in England with great interest. If American ingenuity has finally solved the problem of self-propelled road wagons, a big trade can at once be secured in Liverpool and the surrounding country and throughout the commercial and manufacturing districts of England generally. There is no question so important in this district, from a commercial standpoint, and none so constantly discussed by manufacturers and shippers and importers, as that of the cheaper and more rapid handling of merchandise, both incoming and outgoing. Cheaper freight rates in England would undoubtedly mean an increased demand for American manufactured and natural products. There is a steady growth in capacity of consumption and in the purchasing power of the English people generally. American products, for the most part, can hold their own here against not only continental, but native, products, and in many instances far outstrip them both in quality and cheapness.

So great is the interest in this subject that, since 1895, there has been an organization calling itself the "Self-Propelled Traffic Association," having for its object "the scientific investigation of self-propelled vehicular and road traffic." There is a general organization with the same name and same objects having its headquarters in London, but the Liverpool organization is distinct. The Liverpool organization confines its interest almost entirely to that of the self-propelled freight road wagons, the opinion being that the subject of motor carriages is a distinct one, involving altogether different and less difficult problems from those pertaining to self-propelled freight road wagons. Indeed, the claim is made that it has been demonstrated in New York, London, Paris, and other large cities that, in a mechanical sense, the problem of auto-motor passenger

vehicles has already been solved. Liverpool has made the most thorough practical test of auto-motor freight road wagons, and it is frankly admitted here, both by expert scientific authorities and by practical business men, that this problem, at least so far as English attempts are concerned, has not yet been solved.

All over England, there is a strong feeling on the part of manufacturers and shippers against the management of the railroads, because of the enormously high freight rates and lack of facilities afforded. It is very difficult to give any comparison between the rates charged in America and in Great Britain, but I am informed on good authority that, speaking generally, the rates here are from two to three times as much as they are in America. At the meeting of the British association held last summer, one of the speakers said that in Great Britain coal freights by rail are about 1 penny (2 cents) per ton per mile, while in America the rate is only about one-sixth of 1 penny; and he went on to say that, while the English coal cars carry only 8 tons each, the American cars carry as much as 40 tons each; and that, while the English locomotives weigh about two-thirds as much as American locomotives, they only haul half as much freight. While the English system of "truckage" affords greater facilities for the removal of merchandise from the docks to the railroad depots and to warehouses in the immediate locality than does the system prevailing at New York and other large American ports, yet it is undoubtedly true that the English railroads do not afford nearly the facilities that are given by American railroads in other directions. This is owing partly to the lower hauling power of the engines and the smallness of the freight cars in use in Great Britain, as compared with America; but there is another reason, which is, the great conservatism and lack of enterprise on the part of the railroad managers in Great Britain.

I will give one illustration which recently came under my own observation. The American chilled-meat trade has grown to great proportions in England, and it would be still greater if the railroads provided or allowed the American companies carrying on the business to use their own refrigerator cars specially adapted for the carrying of meat. The meat arrives in Liverpool in splendid condition, it being carried over in specially designed refrigerator compartments on the steamships. When it arrives here, it is hauled in great lumbering and slow-moving wagons from the docks to the railroad depots, and is there transferred to the freight cars for distribution all over England, particularly to the manufacturing towns in the north. The freight cars provided are totally unsuited for the purpose. They are ordinary "box" cars, and often are old and dirty. In the particular case I speak of, the American company

designed a refrigerator car similar to that in general use in America, but so constructed as to suit the conditions of English railroads. An offer was also made to furnish special refrigerator wagons, which could receive the meat from the ship's side, be put on flat cars at the depot, and at the end of the railroad journey taken off and sent direct to the local place of distribution, without there being any intermediate handling. A proposition was made to the management of the railroads on an equitable commercial basis for the use of these cars and wagons, but it was refused—and there is no doubt that the real reason was that the railroad management did not want to forego the profit they would make on using their old rolling stock. It was a clear instance of the shortsighted “penny-wise-pound-foolish” policy against which the more progressive of the British commercial community are so bitterly railing. There are other conditions as to railroads—such as the enormous cost of rights of way, and of railroad construction generally—which will probably render it impossible for freight rates in England to ever be cut down as low as they are in America.

There are a number of schemes being agitated to bring about lower freight rates in England. Although there seems to be but little popular movement in its favor as yet, it is seriously urged by many interested in commerce that all the railroads should be “nationalized”—that is, should be owned and operated by the National Government, just as street tramways are beginning to be controlled by the British municipalities. There is a regular organized movement on the part of commercial bodies to establish light narrow-gauge steam and electric railways running from Liverpool to Manchester and to all the surrounding towns, to be owned and operated by the municipalities, both separately and jointly, as may be to the best advantage. The other proposition is that to which the Self-Propelled Traffic Association is devoting itself—viz, the use of auto-motor freight wagons on the public highways. It is admitted, however, that direct competition with the railways is only possible when the distances are below, say, 60 miles, and when the railroad cartages, terminals, and haulage—*i. e.*, the “through” freight—together, are at least 2d. (4 cents) per mile per net ton. The railroads over here do not provide sidings to factories and warehouses to the same extent as is done in America; and one advantage claimed for the proposed auto-motor wagon system is that it would avoid handling and breaking bulk, and would enable merchandise to be transferred right from the ship's side in dock to the factory or warehouse, not only within Liverpool, but in the other manufacturing and distributing centers within a radius of 50 or 60 miles. Another advantage put forward is that this system would save time as compared with

carriage by railroad, as there are many and often long delays on English railroads in switching, to allow passenger trains to pass, etc. It is also urged that the motor wagons would act as feeders to the trunk railroad lines. The first railroad in the world was between Liverpool and Manchester in 1830, and it is said that before its establishment, there daily passed over the highways between the two cities 1,000 tons of freight.

The Liverpool trials of motor vehicles for heavy traffic took place from May 24 to May 27, 1898. The conditions were somewhat severe, the tests being of the most thorough and technical character. The awards were made during the summer, but the judges' joint report was formally presented only a short time ago. The judges were expert mechanical engineers, and the report is considered the most scientific and technical ever made upon this subject.

The following are the most important conclusions of the judges:

Although the calculated costs per net ton mile show a saving on existing railway rates, we do not consider that motor vehicles could successfully compete for traffic in opposition to reduced railway rates, except under special circumstances.

Whilst it has been practically demonstrated under test of actual working, of great severity, that new machines may work in commercial competition with railway rates with loads up to 4 tons, and over distances of from 30 to 40 miles, the severity of the duties which auto-motor vehicles have to perform in carrying heavy loads at useful speeds, on common roads, is so great as to involve even greater maintenance and depreciation charges than those which we have used in our calculations. This has a twofold effect—first, in increasing the cost of working and, second, in rendering the service in a measure uncertain.

We can not disguise the fact that motor vehicles, in the present stage of their development, are liable to temporary breakdowns which might cause considerable delay and annoyance.

The imperfections of common roads are the principal causes of the heavy maintenance and depreciation charges, and of the element of uncertainty which at present attaches to any service of motor vehicles. On good macadam roads, with moderate gradients, the vehicles to which prizes were awarded would do good service with the respective loads carried during the trials, but none of them could be relied upon for a regular service on roads such as those of the routes selected for the competition.

We anticipate that the consumption of fuel and water may be very considerably increased when the vehicles have to run over wet, muddy, or exceptionally heavy roads; but, as these conditions will be accidental, they will probably not very materially alter the average costs per net ton mile.

The form of wheels and tires adopted by all the manufacturers, though probably perfectly efficient as carriers, were all structurally more or less inefficient as drivers.

None of the vehicles were able to maneuver into and out of an embayment as effectively and rapidly as may be expected when time and experience have effected improvements in design, but they were capable of going anywhere that horse-drawn vehicles are ordinarily required to go.

The general control—stopping, starting, and steering—of the vehicles, when working on the road and amongst traffic, was at least as good as with the best types of horse-drawn vehicles.

The hill-climbing powers of the vehicles were much superior to those of horse-drawn vehicles, when commercial efficiency is considered.

At least two speed gears, or an equivalent reserve of power, are essential to successful working on common roads with steep or even with average gradients.

Generally, too much attention was required by the various operations of regulating and driving the vehicles, and, in order that self-propelled vehicles may command a wider adoption than can yet be confidently recommended, there must be an extended use of automatic arrangements analagous to those in other fields of mechanical science. When such improvements are made, they will have a great effect in placing motor vehicles upon a more practical basis for traffic in cities, by enabling comparatively unskilled attendants to undertake their management.

Although the judges said nothing about the matter in their official conclusions as printed, I learn that it is their opinion—and this opinion is shared generally—that, as at present developed, internal combustion, oil, and electric motors are of little practical value for heavy hauling, and that steam, at least for the present, is the only power capable of meeting the requirements.

The development of auto-motor freight wagons has been much retarded in England in the past by the law. Formerly, all motor wagons were classed as "traction engines," which meant that, under the law, they could only travel on a highway at the rate of 2 miles an hour, with a man walking in front carrying a red flag; and almost every county and municipal authority had obstructive regulations. In 1896, however, a law was passed under which the tare limit of a single motor wagon for use on the highways is 3 tons, exclusive of fuel, water, or accumulators. It is allowed to have one "trailer," and in that case the tare limit is 4 tons. The speed limit is 8 miles per hour for a wagon of 2 tons tare or under, 5 miles per hour for a wagon of between 2 and 3 tons tare, and in the latter case when the wagon has a "trailer," a speed limit of 6 miles per hour is allowed. The maximum width allowed for a vehicle is 6 feet 6 inches. The minimum width of tires is $2\frac{1}{2}$ inches for wagons of 15 cwt. to 1 ton tare, 3 inches for wagons between 1 and 2 tons tare, and 4 inches for wagons above 2 tons. It should be remembered that an English ton is 2,240 pounds. Other important requirements of the law are that auto-motor freight wagons must be so constructed as to be capable of being moved backwards by mechanical application and must have two independent brakes, and the motor must not emit any visible vapor except from temporary or accidental cause.

It will be noted that the conclusions of the judges above given are very conservative. They are, however, by no means discouraging to the enthusiasts of the Self-Propelled Traffic Association, who express themselves as determined to solve the problem. They claim to have demonstrated that success is not far off, and quite a number of orders have been given by witnesses of the trials. It is said

that failure to arrive at absolute success was principally owing to the poorly constructed wheels, and it is claimed that since the trials this defect has been remedied. The association has already determined to hold another series of trials in 1899, probably in September. In reply to an inquiry, I am officially advised that American competition will be welcomed. Those interested should address the honorary secretary of the Self-Propelled Traffic Association, Mr. E. Shrapnell Smith, Royal Institution, Colquitt street, Liverpool. There will also be a competition in light motor carriages in London next June.

JAMES BOYLE,
Consul.

LIVERPOOL, *January 10, 1899.*

EFFORTS TO IMPROVE THE FRENCH MERCHANT MARINE.

Consul Thackara writes from Havre, January 12, 1899:

The parliamentary committee appointed by the Minister of Commerce in July, 1897, in obedience to a resolution of the Chamber of Deputies, adopted December 1, 1896, for the purpose of considering the question of the upbuilding of the French merchant marine and of recommending the best measures to be employed for the purpose, has recently made its report. The constitution of the committee and its line of action were described in the annual report of this consulate for 1897-98.*

As the condition of the American merchant navy is now engaging public attention and is being discussed by our national lawmakers, the recommendations of the committee are given in detail. These were adopted only after conscientious and almost herculean labors in digesting the vast stores of information obtained in course of the arguments brought forth in the meetings of the committee, and during the sessions which were held in public. The committee has been in session over eighteen months. The report is as follows:

The special parliamentary committee, appointed by virtue of a resolution passed by the Chamber of Deputies to study and recommend methods to encourage the merchant marine, has made extensive investigations and entered into a complete review of the subject.

The result of their inquiries and deliberations is that they consider the present condition of the French merchant marine a critical one, especially in regard to its ability to successfully compete with that of other nations. This is notably the case with steamships. Its relative inferiority, already demonstrated, becomes more and more apparent each day, and with each advancing stride made by the steamship lines of other foreign countries.

*To appear in the forthcoming edition of *Commercial Relations, 1897-98.*

This state of affairs, if prolonged, would lead to the most disastrous commercial, social, military, and political results; and it is quite natural that the Government should give its attention to the best measures of remedying such a serious situation, the power to ameliorate which, from the very nature of things, can not emanate from private sources.

The committee, after having examined into the various remedies proposed, considers that the first and most important measure to take, in order to come to the aid of the merchant marine, is to modify the act of January 30, 1893,* by the following changes:

"ARTICLE 1. Article 5 of the law of January 30, 1893, is modified as follows:

"As a compensation for the charges imposed upon merchant vessels, by making them practically schools for seamen, who at any and all times up to the age of 45 years, or those who have not performed twenty-five years of service, can be drafted into the national navy, a shipping bounty (compensation d'armement) will be paid to all iron or steel seagoing vessels sailing under the French flag of more than 100 tons gross register and which are less than twenty years old.

"The shipping bounty for steamers is fixed as follows (per day when they are in commission and per gross registered ton): For each ton up to 2,000 tons, 5 centimes (0.965 cent); for each ton above 2,000 up to 3,000 tons, 4 centimes (0.772 cent); for each ton above 3,000 up to 4,000 tons, 3 centimes (0.579 cent); for each ton above 4,000 tons, 2 centimes (0.386 cent).

"The shipping bounty for sailing ships is fixed per day the vessels are in commission and per gross registered ton at half that allowed to steamers.

"With the exceptions enumerated hereafter in the fourth article, the shipping bounty will be paid to all vessels registered before the expiration of the present law, until they are twenty years old.

"ART. 2. Article 6 of the law of January 30, 1893, is modified as follows:

"In order to develop the maritime industries of France, as a compensation for the charges imposed upon the merchant navy and for the excessive cost of vessels built in France, a navigation bounty (prime de navigation) will be paid to all steel or iron seagoing vessels, sailing under the French flag, constructed in France, measuring over 100 gross tons and less than fifteen years old.

"This bounty is fixed as follows: Per 1,000 miles sailed and by gross ton, calculated conformably to articles 1 to 12 of the decree of May 24, 1873, and article 1 of the decree of March 7, 1889:

"(a) For steamers the bounty will be 1.70 francs (32.81 cents) for the first year, with an annual decrease commencing with the date of registration of the vessel of 4 centimes (0.772 cent) for the first period of five years; of 8 centimes (1.544 cents) during the second period of five years; and of 16 centimes (3.088 cents) during the third and last period of five years. In any case, for vessels measuring more than 4,000 gross tons, the bounty will be decreased the first year 1 centime (0.193 cent) per 100 tons or fraction of 100 tons above 4,000 tons, provided the initial sum will not fall below 1.50 francs (28.95 cents).

"(b) For sailing ships, the bounty will be 1.70 francs (32.81 cents) for the first year, with an annual decrease of 6 centimes (1.15 cents), commencing with the date of the registration of the vessel.

"With the exceptions enumerated hereafter in article 4, the bounty will be paid during fifteen years from the registration of the vessel to all ships constructed in France during the period of the present law.

"The two bounties are not cumulative; the highest will only be paid.

"ART. 3. Ships engaged in the international coasting trade will receive the same

* NOTE BY THE CONSUL.—The details of this act were given in my annual report of 1896-97 and published in *Commercial Relations*, vol. ii, p. 230.

shipping bounty (compensation d'armement) as oversea vessels. They will only receive two-thirds of the navigation bounty (prime de navigation) allowed to oversea vessels, to be calculated as described in the article above. Ships which in the same voyage engage in international trade, and also in coasting trade between a French Mediterranean port and a French ocean port, a French English Channel port or a French port in the North Sea, or inversely, are entitled to the shipping bounty and navigation bounty for the time occupied, or the number of miles sailed when the ships are actually engaged in international trade; provided that the total amount of merchandise taken in or discharged by them in foreign ports during the said voyage amounts to at least one-third of their net tonnage.

"Oversea vessels, in going or returning, which may call at Port Said, are entitled to the bounties for the distance they may have sailed.

"ART. 4. Are excepted from all participation in the two bounties:

"(a) Ships which obtain their French register after they are ten years old.

"(b) Ships engaged in deep-sea and coast fishing, vessels subsidized by the Government, and yachts.

"(c) Ships which are engaged exclusively in traffic reserved to French vessels only; also those which ply between French and foreign ports which are situated less than 120 miles apart.

"(d) Ships engaged in traffic reserved to French vessels only, which call at foreign ports without discharging or taking on merchandise amounting to at least one-third of their net tonnage.

"ART. 5. Articles 5 and 6 of the present law, without change, will remain applicable for the duration of the law, to all vessels, whether of wood, iron, or steel, the owners of which claim the benefits of the said articles.

"ART. 6. The law of January 30, 1893, modified by the changes above mentioned, will be continued in force for a period of twenty years, commencing from the date of the act which will make these modifications a part of the law."

The adoption of these changes will most certainly have, according to the unanimous opinion of the commission, the most happy results in developing our merchant industries. Therefore, the commission has the honor of submitting to the Minister of Commerce the conclusions above stated. It begs him to approve of them and to use his great influence with the ministry in insisting upon the necessity of prompt action.

Consul Skinner, of Marseilles, on January 12, 1899, writes:

The annual report of the Marseilles Chamber of Commerce to the Minister of Commerce has very recently made its appearance, the statistics covering the year 1897. It appears from this report that the subject of the merchant marine is being considered with as much interest in France as it now is in the United States. Reporting a gain of 163,943 in the tonnage entered Marseilles for 1897 over 1896, the situation is stated to be far from reassuring. Comparison is made with statistics from other ports, notably Genoa, Antwerp, and Rotterdam, where the following gains of 1897 over 1896 are reported: Genoa, 516,000 tons; Antwerp, 646,000 tons; Rotterdam, 731,000 tons.

The gradual disappearance of the French flag from commerce is

declared to be "in spite of the law of 1893, which the public powers recognize as absolutely insufficient." The following tables are given:

Table of bounties for navigation and construction paid since 1881.

Year.	Bounties for navigation.		Bounties for construction.	
	<i>Francs.</i>	<i>\$</i>	<i>Francs.</i>	<i>\$</i>
1881.....	2,900,000	*\$580,000	900,000	*\$180,000
1882.....	6,400,000	1,280,000	4,500,000	900,000
1883.....	8,400,000	1,680,000	3,100,000	620,000
1884.....	8,500,000	1,860,000	4,400,000	880,000
1885.....	7,500,000	1,500,000	1,100,000	220,000
1886.....	7,500,000	1,500,000	3,000,000	600,000
1887.....	8,200,000	1,640,000	1,400,000	280,000
1888.....	8,190,000	1,630,000	2,200,000	440,000
1889.....	8,400,000	1,680,000	3,000,000	600,000
1890.....	8,000,000	1,600,000	2,800,000	560,000
1891.....	7,300,000	1,460,000	2,800,000	560,000
1892.....	7,200,000	1,450,000	2,000,000	400,000
1893.....	7,900,000	1,580,000	2,100,000	420,000
1894.....	7,800,000	1,560,000	2,000,000	400,000
1895.....	8,500,000	1,860,000	2,800,000	560,000
1896.....	9,500,000	1,900,000	4,100,000	820,000

* In round numbers.

Tonnage of net gauge of ships entered in the principal ports of the world in 1887 and 1895.

Port.	1887.	1895.	Port.	1887.	1895.
	<i>Tonnage.</i>	<i>Tonnage.</i>		<i>Tonnage.</i>	<i>Tonnage.</i>
London.....	12,307,166	14,991,294	Bordeaux.....	1,928,446	1,646,405
Constantinople.....	8,666,012	13,067,503	Naples.....	1,729,069	2,535,762
Liverpool.....	7,940,788	8,675,049	Valencia.....	1,665,884	969,037
Hongkong.....	6,550,000	7,826,398	Alexandria.....	1,618,036	2,216,667
New York*.....	6,087,110	6,911,782	Calcutta.....	1,553,575	1,937,835
Newcastle.....	6,002,475	8,095,671	Barcelona.....	1,515,250	1,661,148
Suez Canal.....	5,903,024	8,448,383	Bremen.....	1,444,683	2,183,274
Cardiff.....	5,344,426	7,891,223	Smyrna.....	1,420,668	1,836,258
Marseilles.....	4,820,370	4,479,015	Trieste.....	1,384,877	1,760,055
Hamburg.....	3,920,234	6,254,493	Leghorn.....	1,355,602	1,566,400
Antwerp.....	3,717,738	5,360,824	Canton.....	1,333,134	1,816,300
Malta.....	3,301,987	3,430,202	Philadelphia.....	1,290,762	1,421,081
Genoa.....	2,953,894	3,968,200	Boston.....	1,282,159	1,607,200
Sunderland.....	2,837,152	2,531,159	Palermo.....	1,259,511	1,587,174
Glasgow.....	2,713,698	3,138,871	Dunkirk.....	1,138,716	1,343,045
Havre.....	2,485,357	2,551,617	Messina.....	1,080,479	1,975,595
Rotterdam.....	2,448,284	4,214,940	Cette.....	1,041,752	1,004,071
Buenos Ayres.....	2,400,000	4,925,333	Venice.....	998,563	1,203,500
Newport.....	2,299,254	2,169,971	San Francisco.....	965,054	1,221,136
Hull.....	2,223,857	2,624,554	Amsterdam.....	913,647	1,760,515
Bombay.....	2,135,385	1,291,847	Rouen.....	823,942	882,378
Lisbon.....	2,041,966	3,454,749			

* Figures for the United States comprise only foreign commerce, without coasting trade.

† 1894.

THE WORLD'S SHIPBUILDING IN 1898.

Consul Metcalf sends from Newcastle-on-Tyne, under date of December 31, 1898, clipping from the Daily Journal of even date, showing the shipbuilding of the world during the year just closed. The article says, in part:

GREAT BRITAIN.

The shipbuilding for the last eighteen years has been:

Year.	Total production reported.	Year.	Total production reported.
	<i>Tons.</i>		<i>Tons.</i>
1881	1,000,000	1890	1,279,077
1882	1,200,000	1891	1,209,904
1883	1,250,000	1892	1,194,784
1884	750,000	1893	878,000
1885	540,422	1894	1,080,419
1886	473,675	1895	1,074,890
1887	578,668	1896	1,316,906
1888	903,687	1897	1,095,895
1889	1,332,889	1898	1,610,000

Our figures are now given in round numbers because part of the records give the size, and not the tonnage, and others give displacement tons, so that an estimate has to be made of these. If last year be excluded—the effect of the strike making that abnormal—it will be seen that the output has advanced since 1895; but many shipbuilders doubt whether the highest point has yet been reached. Still, the production is an enormous one. It is not only in excess by 500,000 tons of that for the previous year, but it exceeds by nearly 300,000 tons the year 1889, which has hitherto been the record year for the United Kingdom. A production of nearly 135,000 tons monthly for this country, and that production varied from a small yacht to a battle ship, is an output that must be considered wonderful. A further fact that is still more surprising is that considerably more than half that production is from Blyth, the Tyne, the Wear, West Hartlepool, the Tees, and Whitby. The comparatively limited stretch of seacoast from the Tyne to the Tees, inclusive, gives half the tonnage built in the United Kingdom last year. The two chief centers are the northeast coast and the Clyde district.

There are fewer firms engaged in the northeastern district than in that of the Clyde, but they turned off the stocks more ships in the year; and, as the average tonnage of these ships was larger locally than on the Clyde, the total yield of the English district is very far above that of the Scotch. If we contrast the figures for the districts for two years, we find that the Clyde district added about 126,000 tons this year to its production of last year; whilst the northeast coast added 290,000 tons.

Next comes the question of the builders who have contributed most to that vast output of the United Kingdom. It is usually found that the "blue ribbon of shipbuilding" varies between Belfast, the Tyne, and West Hartlepool. Messrs. W. Gray & Co., Messrs. Harland & Wolff, the Palmer Shipbuilding Company, and

Russell & Co. are amongst those who have in different years contributed most to the output. For the present year the following is the position:

	Tons.
1. W. Gray & Co., West Hartlepool.....	72, 323
2. C. S. Swan & Hunter, Wallsend.....	68, 696
3. Harland & Wolff, Belfast.....	67, 905
4. Sir W. G. Armstrong, Whitworth & Co.....	54, 397

The extent of the tonnage built by these great builders is enormous. It is attained in most cases by the inclusion of steamers of vast magnitude. Thus, at Belfast two steamers of over 12,000 tons figure in the returns; and the Tyne has one of close upon 10,000 tons from the Wallsend yard that takes second place this year; whilst the firm that takes the premier place—Messrs. W. Gray & Co., of West Hartlepool—have no steamer of more than about 3,500 tons, but their enormous output is attained by the large number of twenty-seven steamers—more than one each fortnight.

In the year, the cost of steamers has considerably advanced. To give an illustration of the advance, a year ago a cargo steamer of good size was contracted for at £33,500, and now an exactly similar vessel has been contracted for at a little over £37,000. The advance has been enforced by the higher cost of labor, by the higher price of engines, and by dearer plates and angles. A year ago steel plates were at about £5 5s. (\$25.55) per ton; now the quotation is close upon £6 17s. 6d. (\$33.46) per ton, whilst the price of steel angles has advanced correspondingly. Indeed, one of the chief shipbuilders puts the extent of the rise in steel plates a little more than this—at 35s. (\$8.52) per ton on the year. Wages have risen nominally 5 per cent, but in reality the delay through the strike of the engineers, and at times the irregularity of working, has caused the cost to be much above the nominal amount of the advance. As it is, higher wages and materials make the quotation of a year ago—£6 5s. (\$30.42) per ton for a 5,000-ton steamer—now fully £7 5s. (\$35.28) per ton. It leads to a considerable appreciation of the cost of the steamer; and it, of course, entails the need for better freights to make it remunerative. It remains to be seen whether the advance has reached its height. Coal is becoming dearer, and this will react upon iron and steel; and it is possible that other items of the cost of production may in degree rise further. At present, the builders have full work for many months ahead, and thus there is rather the probability that for any additional orders that are forced on the market, higher prices still may have to be paid. It may be noted, in passing, that the advance in the cost of the engines has been fully concurrent with that of the advance in the cost of the hull.

FOREIGN.

We are able to illustrate, from the returns of foreign shipbuilders, the growth and extent and variety of the work of the builders abroad. It is impossible to give a full list of vessels built abroad. Time prevents the obtaining of lists from builders in the Far East; and some of the continental shipbuilders, including two of the largest in Germany, decline to furnish these lists. But the returns we give prove that in many lands there is increased building of ships—at first generally with British material, and then with material made in their own country. There is thus in shipbuilding an increasing international competition which will make itself most felt when trade is duller. We have many advantages in the competition. We have the greatest fleets, which will need replenishing from time to time. We are the largest producers of the "mild Siemens steel," which is the metal preferred for shipbuilding; for, whilst twenty years ago we produced only 150,000 tons of mild steel ingots, now our production is over 2,600,000 tons yearly. Sir N. Barnaby's words as to war ships apply to steamers generally—"engines are steel, boilers are

steel, the hulls" are also of the metal, and the mills for the manufacture of the plates are unequalled probably in the world. Again, we have adequate supplies of fuel, and our national position disposes the materials and fuel so near to the building centers, that carriage is less in cost to the ports than in most countries. Against these advantages are to be put dear wages and sometimes interference of trades unions with the economic working of business; whilst our competitors have cheap labor, increasingly efficient; their building operations are aided by bounties; and the whole attempts of nations are to foster industries unfairly. There is the gain to us that on the sea the cheapest carrier is preferred, and the mercantile navy we have is still far away the most effective. Our rivals are trying to develop trade by costly liners, and it is likely to be long before they build up great fleets of the free ships that sail every ocean. It will need, however, increasing efforts on the part of shipbuilders—masters and men—and shipowners and seamen, to retain and enlarge that vast and valuable trade that we have as the great ocean carriers of the world.

We have received returns from the United States, Austria, Belgium, Norway, France, Germany, and Denmark. The output of the German yards varies from 5,000 tons to over 31,000 tons, and does not include vessels of so large a size as those of the preceding year. That factor affects the return of the Vulcan Company, of Stettin. They launched in 1896 a steamer—the *Kaiser Wilhelm*—of 14,349 tons, which was one of greater tonnage than all they have put off the stocks this year.

Shipbuilding in foreign countries.

Description.	Gross tons register.	Horse-power.
France:		
Forges et Chantiers de la Mediterranee, La Seyne.....	17,395	32,710
Germany:		
Flensburger Schiffsbau Gesellschaft, Flensburg.....	31,457	14,250
Howaltswerke, Kiel.....	12,885	7,435
Act Gesells Neptun, Rostock.....	12,304	4,900
J. C. Tecklenborg, Geestemünde.....	10,105	5,000
Vulcan Shipbuilding Co., Stettin.....	8,840	18,000
Reiherstieg Schiffswerfte, Hamburg.....	8,744	4,000
Henry Koch, Lübeck.....	5,955	2,735
Denmark:		
Burmeister & Wain, Limited, Copenhagen.....	7,395	4,270
Elsinore Shipbuilding Co., Elsinore.....	4,851	3,800
Norway:		
Fevig Jernskibsbyggeri, Arendal.....	3,931	2,480
Bergen Mekaniske Værkstadt, Bergen.....	3,056	1,650
Akers Mek, Værkstadt, Christiania.....	2,063	2,185
Trondhjems Mek, Værkstadt, Drontheim.....	1,207	1,280
Stavanger Stoberi and Dok Co., Stavanger.....	469	390
Austria:		
Stabilimento Tecnico, Trieste.....	10,342	15,920
United States:		
Union Iron Works, San Francisco.....	21,144	39,500
Harlan & Hollingsworth Co., Wilmington.....		35,200
Delaware River Shipbuilding Co., Chester.....	11,391	10,650
Globe Ironworks, Cleveland.....	9,941	7,500

* In addition to the Government tonnage.

Belgium.—Société John Cockerill Seraing. A return sent us by the famous Belgian firm does not give tonnage, but shows that it has launched ten vessels in the year—stern-wheel steamers for the Kongo chiefly—varying in length from about 27 feet up to 147, and in indicated horsepower from 52 up to 220. In addition, pontoons and elevators have been built and other work carried out. All the steamers were of steel.

PITTSBURG PIG IRON IN ENGLAND.

Consul Halstead, of Birmingham, under date of January 4, 1899, sends a clipping from the Birmingham Daily Mail in regard to a shipment of 2,000 tons of Pittsburg pig iron to Birmingham. The American pig iron coming into that district, says the consul, has hitherto been mainly Alabama iron. The clipping reads:

[From the Birmingham Daily Mail, January 3, 1899.]

BIRMINGHAM'S BIG COMPETITOR.

We have received this morning from one of our American correspondents a curious illustration of the competition to which English, and especially Midland, trade is being subjected by the United States. During the last fortnight, the prominent topic in shipping circles is the vast consignment of American produce to Great Britain. From Pittsburg are being shipped, via Boston, enormous quantities of pig iron to Birmingham. "Just think of it," said an American shipper to our correspondent; "sending iron in these quantities to the iron districts of England. Who would ever have thought of it years ago? The bare suggestion of it would have been enough to stamp a man as a fit subject for a lunatic asylum. Yet we have 2,000 tons on the way to Boston for shipment to England." Our correspondent was curious to know how the trade could be done at a profit. "Very simple," was the laconic reply. We can and do outsell the other fellow on the other side. Just consider the expense of getting iron to Birmingham. The freight charges from Pittsburg to Boston are about \$2.50 a ton;* the ocean charges are about the same, and getting it to Birmingham costs another \$2.50; and yet we can do this at a good profit." These figures—we assume, of course, that our correspondent presents them accurately—are highly instructive. They show, at any rate, that it is possible to overestimate the effect of distance as a factor in commercial competition. Note, in the first place, the difference between the English and the American railway charges. American trade with Europe is hardly handicapped at all by the Atlantic. Apparently it costs no more to send a ton of Yankee iron from Boston to Liverpool—a distance of close upon 3,000 miles—than it does to send a ton of Birmingham-made goods from here to the Mersey. Very often, the iron comes as ballast. Every year the great ocean-traveling cargo steamers get bigger and faster. It is no use launching small cargo steamers nowadays. Shipping companies have long since learned the stern truth of that. Freight charges have been reduced to such a low rate that the only chance of making a profit for the shareholders is to build the boats as fast and as big as possible. All this must tell in favor of American trade. Our correspondent states that in Germany, American iron is making such inroads that the native ironmasters are advocating "extortionate" railroad charges from the seaboard to the interior, so as to shut out the trans-Atlantic iron. This, of course, is one way of fighting the giant of the West. But it does not accord with English ideas of free and unfettered commerce. In England, we fully recognize that in America we have to compete with a country of unlimited natural resources. Nothing could be more remarkable than the statistics of the exports of American merchandise. A New York publication, from which we are quoting, shows that

* In the news columns of the Mail the statement appears that the freight from Pittsburg to Boston—400 miles—was the same as from Liverpool to Birmingham—some 97 miles.

for the last three years, the exports of merchandise exceeded the imports of the like class by \$1,249,542,000; while for the three previous years the surplus of exports was only \$263,931,000. The United States exports for 1898 will amount to \$1,200,000,000. Those of Great Britain, for the first ten months of this year, amount to \$962,500,000, or at the rate of \$1,155,000,000. These figures represent domestic products alone, while those for the United States include reexports of foreign goods. England's exports of foreign and colonial products are running at the rate of \$300,000,000 per year; which carries up her current total export trade to \$1,455,000,000, or \$255,000,000 more than that of our cousins across the Atlantic. The United States now ranks a good second among the exporting nations. What the approaching century has in store for her can only be approximately guessed. As a producer of iron and steel, she is already beating everybody. The enormous contracts for steel which have gone to the United States lately from all parts of the world tell their own tale. Moreover, she is sending nuts and bolts to Birmingham and neighborhood at a price which would enable the merchants to buy them and re-export them at a profit to other countries. Then we are told that a big trade is springing up in American bedsteads. This was a trade in which Birmingham at one time had the practical monopoly. But we are told that lately the Yankee bedstead trade has had something in the nature of a spurt, and there is a rumor of a very large order going from a well-known house in London to our opponents across the Atlantic. We hope this is not true. If it be, the new bedstead combination should look into it and find out the reason for this new competition.

Under date of January 6, Mr. Halstead supplements his report by the following extract:

[From the Birmingham Mail, January 5, 1899.]

THE AMERICAN COMPETITION IN THE IRON TRADE.

The announcement made in the Mail on Tuesday indicating that the American competition in the iron trade of the Midlands is likely to become much keener in the near future than has ever been known before, caused quite a flutter of surprise amongst the public generally. To many of those, however, more intimately acquainted with the great iron industry of Staffordshire and adjoining counties, the intelligence that a large-consignment of billet iron was on its way from Pittsburgh to the Birmingham district was treated with comparative indifference. It is well known that for some time past, large shipments of both pig iron and also iron partially manufactured, intended to be rolled in this country for the manufacture of nuts and bolts, have been coming in, and it is stated that thousands of tons of this iron have been imported into England quite recently from America. It is further asserted, on good authority, that some of the large iron-making concerns in this district are purchasing large quantities of it either in the raw or partially finished state. The chief among the leading companies engaged in Staffordshire in producing pig and finished iron do not look upon the announcement in a very serious light; and in a chat which a Mail representative had yesterday with Sir Benjamin Hingley on the subject, the latter expressed the opinion somewhat jocularly that there is a good deal of cry and very little wool in the statements. He, however, was quite willing to admit that the Americans are, and are likely to be, formidable competitors in the production of iron, and that ultimately this fierce competition between the two countries would open up very serious questions affecting both the British manufacturer and the workmen of this country. In reply to a question, Sir Benjamin said at present there certainly was no cause for anxiety. As he smilingly remarked, what are 2,000 or 3,000 tons of iron in view of the great demand there is for this article? British makers have more orders than they can

execute, and they can not expect to make all the iron required in the world. It is only fair to state that others interested in the iron trade take a more alarmist view of the situation and hold the opinion that the competition from America in course of time can not fail to have a damaging effect upon our home industries; and there are those who predict that a similar state of things will be brought about in the finished iron and nut and bolt trades, as that which is known to exist at present in some branches of the wire trade. These manufacturers are able to import from America and other countries at a cheaper rate than they can make it themselves. In certain cases, where a stipulation is made for English-made wire, the home manufacturers are compelled to charge a higher price. A rather significant move is now being made in Staffordshire and other parts of the Black Country, with the view of reviving the agitation for the reduction of railway rates. A large and influential committee is in course of formation, which will include, in addition to the representatives of the great iron and hardware industries in the Midlands, delegates from the governing bodies of various towns. The chief business to which the attention of the committee will be turned will be the consideration as to whether, and in what way, the system of water communication with the chief ports can be materially improved and cheapened. The general complaint is that the railway rates and freight charges are all in favor of the foreigner. "For instance," said one gentleman to the Mail reporter, "if I want to forward a certain consignment from Birmingham to Hull, the freight rates are just double what they would be for the same consignment from Hull to Birmingham."

Another clipping inclosed by Mr. Halstead consists of a statement, by a correspondent, that railway rates from Liverpool to Birmingham were only 7s. 7d. (\$1.87) per ton, instead of 10s. 4d. (\$2.50), as asserted. This assertion brought forth an answer in the Birmingham Post of January 9 (transmitted on the same date by Consul Halstead), written by J. H. Rogers, secretary of the Cooperative Express. As his letter contains information of importance to American shippers, it is given in full.

To the Editor of the Daily Post.

SIR: Your correspondent, Mr. C. W. Milne, in his letter of the 5th instant, omitted to state that the rates he quoted, viz, 7s. 7d. per ton to Birmingham in 4-ton lots, are from Liverpool railway station, and not ex ship. Goods shipped from Boston will incur the following charges before reaching the railway station at Liverpool:

	s.	d.	Cts.
Master portorage.....per ton...	0	6	=12. 1
Dock and town dues.....do.....	0	6	=12. 1
Cartage.....do.....	1	0	=24. 3
Attendance at ship.....do.....	1	0	=24. 3
Total.....	3	0	=72. 8

Passing customs entry, 2s. 6d. (50.8 cents) per consignment.

These additions swell the rate for pig iron delivered in Birmingham to 10s. 7d. (\$2.603) per ton. It is true that the railroad companies can not legally obtain payment for "attendance at ship" and "passing customs entry," but it is equally true that they add these charges to their rates and obtain payment for them in the majority of cases. The cost of shipment from Boston to Liverpool is certainly less than the railway carriage from Liverpool to Birmingham. This is, however, but an insignificant sample of the existing anomalies in railway rates.

To give further instances: The special hardware rate from Birmingham to London is 27s. 6d. (\$6.69) per ton; yet sugar is delivered in Birmingham from Hamburg at 20s. (\$4.866) per ton, and sugar from Glasgow to Birmingham at 25s. (\$5.08) per ton. Nails from Antwerp to Birmingham are charged 15s. (\$3.649) per ton, and from Birmingham to London 15s. (\$3.649) per ton; spelter from Rotterdam to Birmingham is charged 13s. (\$3.16) per ton, and from London to Birmingham 12s. 6d. (\$3.04) per ton. The traders in the Midlands suffer the greatest injustice from excessive railway rating, inasmuch as the railway companies quote special through rates to American merchants consigning their goods to London via Liverpool. Provisions are now being sent from New York to London via Liverpool at a less rate than the same quantity of provisions can be forwarded by rail from Liverpool to London by the Liverpool merchants; and when the Americans are sufficiently up to date in their patterns of bedsteads to do an English trade, they will be in a position to consign them to London from the States at a less cost than the Birmingham manufacturers are now paying for carriage between Birmingham and London.

It is hopeless to set up a water-way competition against the railway, for the simple reason that the water carriers have their rates fixed by the railway conference; and, within the last six weeks, the Manchester Ship Canal Company has allied itself to the Railway Clearing House. The only remedy to this unsatisfactory state of affairs is the formation of a union of all influential traders in the Kingdom. But, notwithstanding that the Midland traders are so unfairly treated by the railway companies, every endeavor to form a combination or union of traders to take action with a view to compel the railway companies to adjust the existing anomalies has met with very little support in Birmingham, although traders from other districts where they are not so heavily rated are by cooperation at present engaged in an endeavor to obtain a rebate from the rates at present being charged by the various railway companies.

It may be that the matters complained of will never be thoroughly remedied until such time as the Government take over the whole of the railway system.

PLOWS IN ITALY.

With a view to the practical demonstration of the advantages of modern agricultural implements, certain interesting experiments were recently carried on in this vicinity, comparing the efficacy of different makes of plows. The experiments were conducted near Mestre, under the auspices of the Cattedra Ambulante di Agricoltura di Venezia. Three German firms, who maintain representatives in this district and have been somewhat successful in introducing their manufactures, submitted their plows to the test. The plows were those known in the market as the Eberhardt, the Eckert, and the Sack. The committee in charge arranged the following programme:

- (1) Deep plowing with single plowshare.
- (2) Medium plowing with single plowshare.
- (3) Surface plowing with single plowshare.
- (4) Work with double plowshare.
- (5) Work with triple plowshare.
- (6) Experiments with various implements.

The soil in which the experiments took place consisted of a stratum of clay mixed with sand, ranging below into a composition in which sand predominated. The depth to which the soil had been plowed the previous year did not exceed 7.9 inches, and since then, the ground had not been used. The area available was divided into three sections, one being assigned to each of the firms represented. The first item of the programme was deep plowing, and 13.8 inches was the depth agreed upon. To each plow ten oxen were attached, not because so strong a traction force was actually necessary, but in order to provide against any unforeseen obstacle, and to avoid tiring the animals. The results of the first trial are indicated in the accompanying table:

Name of plow.	Trade-mark.	Name of firm.	Weight.	Catalogue price.	Width of share.	Average depth reached.	Traction per 0.15 square inch of section worked.	Average total force.
			<i>Pounds.</i>		<i>Inches.</i>	<i>Inches.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Colonist.....	N. U. C. I.....	Eberhardt..	363	\$32.81	11.8	13.4	1.54	1,573
Progress.....	N. E. S. B. G. I.....	do.....	396	34.75	12.6	14.4	1.26	1,663.2
Eckert.....	E. S. I.....	Eckert	396	34.75	12.6	14.2	.82	946
Do	P. C. N. 2.....	do.....	329.8	28.95	11	14	.95	935
Rud-Sack	R. 16.....	Sack	345.4	30.88	13	13.4	.87	983.4
Do	R. 16.....	do.....	345.4	30.88	13	12	.93	1,012

Reckoning that each pair of oxen could, without excessive fatigue, exert an average tractional force of 352 pounds, the following results were realized as to the power exerted:

Plow.	Pounds.	Greatest depth obtained.
		<i>Inches.</i>
Colonist.....	2,200	14.17
Progress.....	2,046	15.35
Eckert E. S. I.....	1,430	16.14
Eckert P. C. N. 2.....	1,320	14.56
Rud-Sack	1,298	14.56

According to this estimate, the minimum number of oxen to draw each plow would be: Colonist, 6; Progress, 6; Eckert E. S. I., 4; Eckert P. C. N. 2, 4; Rud-Sack, 4.

In regard to the work done, it was shown that the Colonist plow, as well as the two Eckerts and the Progress, was highly satisfactory, turning the earth well and leaving a clean furrow. The Sack plows did not give such good results, as the furrow would fill almost as soon as made. In this connection, it may be observed that the Rud-Sack R. 16, which is advertised to plow to a depth of 16 or 17 inches,

did not in practical test accomplish this, especially in a moist and compact soil.

So far as materials are concerned, all of these makes leave nothing to be desired, being put together out of the finest quality of steel.

Following the trials for deep work, came those with lighter implements. These were of special importance, because of the fact that among small proprietors the light plow is most used and most required. The distinguishing characteristics of the plows tested are indicated in the accompanying table:

Firm.	Name or mark.	Weight.	Price.	Breadth of share.	Maximum depth of furrow.
		<i>Pounds.</i>		<i>Inches.</i>	<i>Inches.</i>
Eberhardt	Meteor	231	\$25.09	11.02	11.81
Do	Dominus ..	187	19.30	10.63	9.84
Eckert	P. C. N. 3..	257.4	23.16	10.23	11.41
Sack	R. 14 M....	308	27.40	10.63	14.56
Do	D. 10 M....	224.4	19.30	10.23	10.23

The next trials took place with double and triple shared plows—implements adapted to the breaking up of stubble and preparing fields for grain. The results are tabulated below:

Firm.	Name or mark.	Weight.	Price.	Total width of plow-share.	Depth of furrow.
		<i>Pounds.</i>		<i>Inches.</i>	<i>Inches.</i>
Eberhardt.....	Inflexible (2 shares).....	264	\$25.09	18.11	10.62
Eckert	Z. S. R. N. 3 (2 shares)...	275	25.09	19.68	9.84
Sack	Z. H. 9 N. (2 shares).....	290	30.88	21.65	9.84
Eberhardt	Ceres (3 shares).....	416	42.47	28.56	9.84
Sack	D. H. 9 (3 shares).....	359	37.06	30.53	7.87

Particularly good work was done by the double-shared plows, and the depth attained was greater than that claimed by the makers. The two three-shared plows were also fully up to the mark, the Ceres proving somewhat the better.

Taking into consideration the results of these experiments, the following conclusions were reached:

- (1) A good plow for deep work is the Eckert E. S. I.
- (2) A good implement for ordinary work is the Sack R. 14 M.
- (3) For surface work and preparation of the soil, the Eberhardt double and triple shared plows are the best.

H. ABERT JOHNSON,

VENICE, December 22, 1898.

Consul.

IRON MARKET IN SOUTH RUSSIA.

Kharkof is considered the center of the iron industry in southern Russia. This town occupies an important commercial position, and is itself a large consumer of iron and steel. During the present year, a temporary exchange has been formed; and, there being no other in the whole country, this increases the importance of Kharkof, which undoubtedly will soon become one of the most prominent markets in Russia, with its central position and foreign enterprise and capital. The following table of iron sold in this town during the last three months will give an idea of its extensive connections:

Description.	August.		September.		October.	
	<i>Poods.</i>	<i>Tons.</i>	<i>Poods.</i>	<i>Tons.</i>	<i>Poods.</i>	<i>Tons.</i>
Sorted iron from different stations.....	68,497	1,104	64,497	1,038	62,778	1,012½
Sheet iron for roofing.....	22,181	357	24,710	398½	19,920	321
Oxidized iron from Rostoff.....	5,893	95	1,227	19	.....	.....
Cast iron.....	42,425	684	48,848	787	82,971	1,338

Prices are firm and there is a steady demand. Local factories do a large turnover in sorted and sheet iron. At the commencement of this year, sorted iron was considered low; but it afterwards attained the normal price of 1.65 rubles (82½ cents) per 36 pounds.

South Russian or Taganrog sheet iron for roofing purposes, first quality, is considered equal to Ural sheet iron second quality; and, notwithstanding the transportation charges, the Ural iron is cheaper than local.

THOMAS SMITH,
Consul.

Moscow, *December 28, 1898.*

PROPOSED TARIFF CHANGES IN BELGIUM.

A deputation of delegates from the various foreign chambers of commerce in Belgium—Anglo-American, French, and German—had an audience on the 13th instant with Mr. de Smet de Naeyer, Minister of Finance, for the purpose of advancing their objections to the proposed new law inaugurating changes in the present system of levying customs duties on goods taxable ad valorem and, if possible, securing the withdrawal of the bill.

The delegates were received in a most cordial manner and fully discussed every point bearing upon the proposed change with the inspector-general and the director of customs. The representatives

of the Government defended the bill and claimed that there were many points in the Government's favor—for instance, that some importers of foreign goods into Belgium, taxed ad valorem, have adopted the rule of having the names of their respective firms printed on the goods. These goods are then declared at a figure far below the real cost, and here the Government is absolutely powerless to protect itself; because if the customs authorities seize these goods on account of undervaluations, they are unable to dispose of them either at private or public sale, owing to the fact that the name of a certain firm or individual is imprinted upon the article. The delegates readily concurred with the Government representatives on this point, and even requested that stringent measures should be taken to prevent this fraud in future. On the other hand, the delegates maintained their opposition to the proposed law on all points bearing upon the importation of foreign goods into Belgium, wherever such importation is practiced upon an honorable and equitable basis. They told the Government representatives that the system of preemption as practiced at present must be maintained; but, in order to put the customs authorities in a position to prevent all possible fraud, the delegates agreed to abandon the bonus of 10 per cent which the Government actually pays in addition to the value declared on seized goods, or, in other words, give the importer the right to simply abandon his goods in case the custom-house officers should find the valuation too low. They also pointed out the inevitable delays which would result in the delivery of goods to the importer if the proposed change in the present law should be adopted by the legislature, and the arbitrary decisions which the contemplated commission, in case of contested valuation, might render, and from which there would be no appeal. It is believed that a favorable consideration of these demands may be soon expected.

GEO. W. ROOSEVELT,

BRUSSELS, *December 21, 1898.*

Consul.

PROJECT OF LAW RELATIVE TO THE COLLECTION OF DUTY ON GOODS TAXABLE AD VALOREM.

[The proposed amendments are printed in italics.]

ARTICLE 1.

The custom-house declaration for goods taxed ad valorem must mention the value, place of origin or manufacture, with added cost of packing, transportation, insurance, and commission to destination.

ARTICLE 2.

SECTION 1. If the value declared is judged insufficient by the customs officer, he has the right to demand from the importer a supplementary declaration agreeing with the value fixed by him.

SEC. 2. The importer is notified by the customs examiner of the demand of the administration.

ARTICLE 3.

The importer signing the requested supplementary declaration will at once pay the extra duty due. He will not incur any penalty if the supplementary duty *does not exceed* 10 per cent of the value originally declared. If the contrary, he is liable to a fine determined by the provincial director of direct taxes, customs, and excise; this fine can not exceed the quintuple of the fraudulent duty.

ARTICLE 4.

SECTION 1. If the importer refuses to sign the supplementary declaration demanded *he may abandon the goods against payment of the value and reimbursement of duty collected*, unless the person declaring is taken before the arbitration commission created by article 5, hereinafter mentioned.

SEC. 2. And likewise, if the supplementary declaration is not returned to the custom-house at latest within five days after date of notification.

ARTICLE 5.

SECTION 1. There is organized in the Department of Industry and Labor an arbitration commission authorized to decide, in case of litigation, the value of the goods imported.

SEC. 2. This commission is composed of five members, nominated, respectively, by the tribunals of commerce of Brussels, Ghent, and Liege, and by the Minister of Finance, and the Minister of Industry and Labor.

SEC. 3. Each of the above-named authorities designates two deputies to replace, in case of enforced absence, the member of the commission named by them.

SEC. 4. Before assuming duty, the members and deputies take the following oath before the president of the court of the first instance:

"I swear to conscientiously decide upon affairs which are submitted to me, without exception to person, and according to the stipulations of the law."

SEC. 5. Members not functionaries of the commission will receive from the Government a compensation fixed by royal order.

ARTICLE 6.

SECTION 1. In estimating value of goods, the commission may employ experts other than those connected with the commission, but, when possible, selected from a list of names prepared each year by the Minister of Industry and Labor, to whom the tribunals of commerce of the country address propositions to this effect.

SEC. 2. Before proceeding to valuation, experts are sworn before the president of the court of first instance (form of oath inscribed in section 4 of article 5).

SEC. 5. Valuation charges at the expense of the losing party.

ARTICLE 7.

SECTION 1. If the arbitration commission verifies the correctness of the value declared by the importer, an indemnity of delay is awarded him *equal to 2 per cent of the declared value*.

SEC. 2. In case of incorrect declaration, the entry duty is collected on a value determined by the arbitration commission.

SEC. 3. If, according to the arbitration decision, the value of the goods exceeds *more than 10 per cent* of the value declared, the importer is liable to a fine fixed by the provincial director of direct taxes, customs, and excise; this fine can not be more than ten times the duty.

SEC. 4. No fine is applicable in case of undervaluation not exceeding 10 per cent.

ARTICLE 8.

The decision of the commission must be returned within fifteen days after commencement of litigation.

ARTICLE 9.

For security for supplementary duty demanded, and for eventual fine due, the importer may be authorized to freely dispose of all or part of the goods in litigation; this authorization is not accorded unless the value of the goods may be determined either from samples or from a part of the goods themselves.

ARTICLE 10.

SECTION 1. In case of nonpayment of the supplementary duty fine and cost of *expert examination* at latest within the *ten days* from the notification of the decision of the commission, the merchandise will be sold by the customs authorities. Likewise, if the importer, after having signed a supplementary declaration, has not made payment of the extra customs duties or fine due.

SEC. 2. The proceeds of the sale, after deducting supplementary custom duty, fine, and costs, are held at the disposition of whomsoever may be entitled thereto during three years from date of sale.

SEC. 3. If the proceeds to be disposed of are not claimed within the fixed time, the amount is definitely turned into the treasury.

ARTICLE 11.

The Government will fix the date when the present law shall go into effect.

MANUFACTURE OF CARPETS IN SILESIA.

The manufacture of carpets is rapidly becoming an important industry in this province, and has its center at the town of Schmiedeberg. The carpet is an imitation of the Smyrna article, and ranges in price from 12 to 25 marks (equal to \$2.86 to \$5.95) per square meter (10.76 square feet). The process of manufacturing is as follows:

The threads are twisted from German and foreign wool; various wools are used to find the right combination of strength and smoothness. Artificial wool is added to the inferior kinds, and the cheapest qualities are made entirely from the latter material. The wool of which the thread is to be made is first placed upon a machine called the "wolf" or "devil," by which it is torn to small pieces. It now proceeds to another machine called the "Krempel," or "carding bench," which further completes the work of tearing. At the lower end of this carding bench, a kind of a drum is located, around which the thick, smooth wool finally gathers, to be afterwards taken to the weaving room. Here the wool is twisted by a machine into a two, three, or four ply thread, according to requirement. This thread is now taken to the dyeing room, where it undergoes a good washing to clean it from all dirty and oily substances. Only real oriental

colors are used in this process. The colored threads are then cut into small lengths of about 3 centimeters (1.18 inches) each, to form the material for single loops. The loops are now sorted by color into small wooden boxes, and these are handed over to a female laborer called "Knüpfarin," or "tier."

The production of the carpet now commences. The looms in use consist of two side parts connected by iron or wooden bars. The broader the looms, the broader these bars and, consequently, the carpets they produce. The looms have two fronts, so that work may be carried on on both sides at the same time. The smallest looms measure 1 meter (39.37 inches), the largest up to 15 meters (49.2 feet). The number of the working women depends upon the size of the carpet to be made. A space of three-fourths of a meter (29.5 inches) is allotted to each of them. Clever and intelligent workers, however, frequently undertake to manage double space. All the girls sit in one row or line and work simultaneously. The top of the loom contains the chain thread of linen or jute, while at the bottom the receptacle—viz, a drum for rolling up the finished article—is to be found. The chain threads are fixed midway between top and bottom of the loom and serve for binding or for the construction of the carpet. They are passed through the shuttle and afterwards twisted round an iron bar. After this, the chain is tightened and a seam made, upon which the first row of loops is fixed. As soon as a row of loops has been finished across the whole width, a thick end thread of jute is passed across twice. After each passing the chain threads are allowed to cross each other, so that they form a firm weave. Another row of loops is then tied and the edge formed, and so on.

The working girls are seated on low wooden stools, having at the height of their head the pattern of the carpet before them, which they have to copy. Each has at her side the above-mentioned wooden boxes, containing loops of various colors.

The patterns are printed or drawn on paper, and show small squares, each of which indicates a loop, and the colors on the paper correspond with those of the required loops. The girl starts with the first square at the left-hand side at the bottom row and continues tying to the right as far as her space allows. As soon as a row of loops has been finished, the edge is made in the usual way, and this process is carried on until the whole pattern has been completed. At the finish, a seam is added and the carpet cut off and taken from the drum. The loose wool and the dirt is removed and the carpet well beaten on the back to loosen the weaving, which has become hard during the process of manufacture. Next, the shearing machine clips the top five or six times, until a smooth, plush-like surface

is produced, whereupon the seams are renewed and false loops replaced by others, and the carpet is ready for use.

The work is entirely done by piece, and a clever, industrious girl naturally earns more than one less capable. The average wage for a girl amounts to 1.50 marks (36 cents) a day, but the best workers earn as much as 3 marks (71 cents).

There are about 450 hands employed at Schmiedeberg, and 4,262 carpets of various colors and sizes are turned out during a year.

The material used per year consists of 93,153 kilograms (205,365 pounds) of wool thread, 38,269 kilograms (84,367 pounds) of jute, and 980 kilograms (2,160 pounds) of linen.

The carpets are such a good imitation of Smyrna goods that it really takes an expert to distinguish them from the genuine. They are also a great deal cheaper than the Smyrna carpets, and there is naturally a large market for them throughout Germany. They are exported to Austria, Italy, Scandinavia, and Belgium.

C. W. ERDMAN,

BRESLAU, *December 22, 1898.*

Consul.

DEMAND FOR HARDWARE AT MALTA.

A few years ago, some Maltese capitalists decided to erect in the city of Valletta an apartment house. The matter was an experiment with them, as flats had been unknown here. The owners endeavored to incorporate in the construction the most modern ideas, and the result is to-day a fine building occupying a whole block on one of the best streets in the city. So successful was the experiment that every flat in the building, numbering about thirty, has been constantly occupied. By reason of their success, the owners have concluded to erect in the near future more buildings of this class, the demand fully warranting the enterprise. Land has been selected and construction is now under consideration.

Experience has brought to light many defects in the present building, which it is proposed to remedy or improve upon in the new buildings. For one thing, it is desired that the most modern electrical outfits, such as bells, etc., be secured. Passenger elevators and new ideas in plumbing are also desired.

American goods are well thought of at Malta; but, unfortunately, the representation is somewhat limited, due to a great extent to lack of direct communication with the United States. I have had several conversations with the parties referred to, in relation to their procuring American goods for the new buildings, and have explained to them, as far as I have been able, how our flat buildings are con-

structed and finished and the fittings used. The result is that they have become interested to such an extent as to request me to procure for them illustrated catalogues and price lists of goods appertaining to the interior fitting up of buildings of the above class, and especially of door locks, hinges, bolts, window fastenings, and house hardware in general.

I suggest that our manufacturers interested in these lines send suitably printed and illustrated matter, giving as full descriptions as possible, with lowest export prices and terms. Such matter should be addressed to F. C. Lawrence, Great Britain Hotel, Valletta, Malta. I have interested myself in this matter, believing that if I can induce the parties to adopt goods of our manufacture in the proposed work, it will be the means of opening trade. Any further information that may be desired on the subject, I will give promptly upon application.

JOHN H. GROUT, Jr.,

MALTA, *December 19, 1898.*

Consul.

THE PRESENT STATE OF THE WHISKY TRADE IN SCOTLAND.

There are 184 distilleries in the United Kingdom, of which 143 are in Scotland. For many years, the annual production of whisky in the United Kingdom has far exceeded the demand for home consumption and export. For the year ended March 31, 1891, as shown by the inland-revenue returns, the surplus product was, in round numbers, 11,500,000 gallons. In each subsequent year up to March 31, 1896, production increased more rapidly than consumption and exports, and the annual surplus was maintained at about the same quantity as in 1890-91. Extraordinary activity in the distilling industry brought a surplus of 17,500,000 gallons at the end of March, 1897, over the consumption and exports for that twelve-month, and a surplus of 23,000,000 gallons for the year ended March, 31, 1898. At the latter date, the accumulated stocks in bond in the United Kingdom amounted to 137,500,000 gallons. Up to the 1st of December, there had been no diminution in the rate of production, but rather an increase; so that it is safe to assume that the accumulation of whisky in bond has considerably increased since March last. Of the 137,500,000 gallons of surplus whisky in the United Kingdom on March 31, 1898, there were 89,750,000 gallons in bond in Scotland. The production of whisky in Scotland for the year ended March 31 last was 33,700,000 gallons, and the consumption and exports were 21,000,000 gallons. This rate of consumption and export was exceptionally high. Accepting it as the probable rate

for the future, the whisky now in stock in Scotland is more than four years' supply.

The rapid growth of the distilling industry in Scotland during the past three or four years is attributed by the distillers themselves and by the leading men in the whisky trade, first, to the entry of limited-liability, joint-stock companies into the spirits business and, second, to the general favor which indian corn has gained within a brief period as one of the materials of production. The large profits yielded by distilleries years ago under individual ownership, or each in the hands of a few men, prompted the "promoter" to go into this field. Not only were joint-stock companies organized for the building of new distilleries, but many old firms or companies were "floated," the capital stock being greatly increased and the preference shares sold to the public. The money thus obtained was expended in the enlargement of the plants. The clamor of shareholders for dividends naturally stimulated the managers to tremendous activity, and, not unnaturally, production increased faster than the market expanded. Rivalry among some of the larger companies accentuated this condition. They threw all their energies into the manufacture of whisky, in the belief that a market would be found for it and that, as the value of the product increased with age, there was no danger of getting "beyond the market." One of the inevitable results of sharp competition was a resort to the most practicable means for cheapening production. This was found in the use of indian corn, which is now the chief ingredient in what is called "grain spirits." Other ingredients are oats, rye, and inferior barley.

It is said by grain dealers that about three-fourths of the corn imported into Scotland goes to the distillers of grain spirits. The extensive use of grain spirits in the making of the many blends of Scotch whisky is no longer "a secret of the trade." It has been known to the alert few, if not to the general public, for some years. The corn or grain whisky blends well with malt whisky, and the wholesale wine and spirit merchants and blenders have, of course, freely bought the cheaper spirits. The distillers' price for new grain spirits is from 28 to 30 cents a gallon. The distillers' price for new malt whisky is about 70 cents a gallon. Most of the grain distilleries in Scotland are huge establishments. Combined, they can turn out in a day more spirits than the malt distilleries can turn out in the week.

The wholesale whisky trade is in the hands, not of the distillers, but of spirits merchants and blenders. There are prominent distilling companies that are also blenders and merchants, but a large proportion of the product of the distilleries is sold to wholesale merchants and to companies whose business is blending whiskies and supplying the retail trade at home and abroad. Generally speaking, therefore,

the distillers find their market among the wholesale dealers and the blenders. Not a few of the blenders frankly admit that during the past two years, the bulk of the whisky entering into the various blends has been grain spirits. One expert in the trade informs me that several of the best-known blends are three-fifths grain whisky and two-fifths malt.

The cost of the blend, if made of new whiskies, is about 50 cents a gallon. The average wholesale price of three-year-old whiskies (blends), tax free, was, up to a recent date, about \$1.60 a gallon; and the average market value of the stocks in bond, grain whisky and malt whisky, was not far from \$1. That the whisky interests here have been so long able to maintain prices at such figures, despite the constantly increasing overproduction and the immense accumulation of stocks in bond, certainly speaks well for the sagacity of the men in the trade. One strong influence in their favor has been the common opinion—common until a few weeks ago—that markets would open up rapidly in Africa and elsewhere abroad, and that the enterprise of the great companies, shown in the advertising columns of the daily press and the magazines, would soon materially help the sale of Scotch whisky throughout the United Kingdom and in other countries.

That the distillers and wholesalers have had, during the past year, the strongest confidence in the future expansion of the market could not be more clearly demonstrated than by the simple statement that the distilleries, both grain and malt, were operating at their full capacity up to the beginning of December, and that in Edinburgh and district the storage room afforded by "duty-free warehouses" has been more than doubled in 1898. Both wholesale merchants and blenders have made good profits, in a speculative way, by turning over parcel or bulk whisky during the year; but these operations came to an end before the year closed. Late in the autumn, prices began to weaken, and there was recently a decided drop.

The suspension of one of the large distilling and blending companies—Pattisons, Limited, of Leith—early in December changed the situation suddenly. This event brought upon the trade the crisis that had been impending ever since the "boom" in the manufacture of grain spirits began—about three years ago. The immediate effect was to check production in both malt and grain distilleries. A fall in the price of parcel whisky, both grain and malt, soon followed. I have the best authority for the statement that the average reduction on the sales made since the 15th of December is fully 20 per cent. There have been forced sales at a reduction of 30 per cent. Retail prices have not yet been affected, nor have the export prices of the various blends. Vast interests are at stake and the trade is

making every possible effort to prevent a general slump, which would prove enormously disastrous. The indications now are that this threatened result will be averted. The financial institutions behind the huge stock of whisky in bond are insisting upon the abandonment of speculative methods by the trade and the restriction of production. It is probable that forty or fifty comparatively new distilling companies in Scotland will stop production before the middle of the distilling season, which usually runs to June. I am informed that several distilleries have already shut down. This halt in production will, it is hoped, save the trade from a panic; but there are many careful observers who doubt if the prices of whisky can be fully maintained in the coming year.

One phase of the situation can not be regarded with satisfaction from the American point of view. Idle or short-time distilleries in Scotland will mean a reduced market here for American corn.

RUFUS FLEMING,

EDINBURGH, *January 3, 1899.*

Consul.

GAS WORKS AT EDINBURGH.

Consul Fleming sends from Edinburgh, under date of January 19, 1899, copies of a report* of the chief engineer and manager of the Edinburgh and Leith corporations gas commission, which in 1898 visited various works in England and on the Continent to investigate the processes in use in the manufacture of gas, with a view to adopting the best appliances for the new gas works to be constructed at Granton, a suburb of Edinburgh. A newspaper summary of Mr. Herring's report, also sent by Mr. Fleming, reads, in part, as follows:

[From the Scotsman, Edinburgh, January 16, 1899.]

The report reviews the best examples of the plant and appliances seen at the various works, concluding with a brief outline of what should be the guiding principle in the laying out of the new gas works at Granton. During the visits of inspection, both at home and on the continent of Europe, it was remarkable, the report said, to see so many instances where entirely new gas works were being constructed, and in others extensive reconstruction schemes in process of execution. The introduction of the electric light, rather than bringing about any reduction in the consumption of gas, appears to accelerate the demand for the same, if not for lighting purposes, then for cooking and heating and other industrial uses. It was quite evident, by the number of large works now in hand throughout Europe, that the gas administrators of the present day have not the slightest misgivings as to the future of the industry, competition having given it new life, coupled with the fact that the introduction of the incandescent system of gas lighting is destined to be-

* Filed for reference in the Bureau of Foreign Commerce, Department of State.

come universal in the no great distant future. The incandescent system of gas lighting in private houses and shops appears to be much more general on the Continent than at home. This possibly arises from the fact of the cheapness of the mantles abroad. Doubtless, when the patent monopolies run out in this country, which they will do in a very short time now, a great impetus will be given to this system of gas lighting, affording, as it does, a brilliant illumination with a smaller consumption of gas and, what the engineer thinks is of far greater importance, a more perfect combustion of the gas than the flat-flame burners ordinarily used permit. Many of the works visited were situated upon cramped sites of small area, whilst a few, where new works had been built within the last ten years, were well spaced on large areas. Where the latter conditions exist, it was found that a gas works is not the nuisance to the neighborhood that is generally supposed. The new works at Granton are to be laid down in separate sections, each one of which is to be capable of manufacturing 6,000,000 cubic feet per day, and for all practical purposes will be a complete gas works in itself, the railway communications and connections being arranged in such a way that the feeding of the individual sections, or any one of the same, even when the site is entirely covered, can be accomplished without in any way interfering with the operations of the other sections.

Mr. Herring describes the three distinct methods of carbonizing in vogue, namely, horizontal retorts charged by manual labor, horizontal retorts charged by means of power-driven machinery, and inclined retorts, by which the natural force of gravity is made to play a part. The principle that he suggested being adopted in Edinburgh is very similar to the last installation of inclined retorts erected at Huddersfield, with modification which experience had shown to be advantageous. By means of measuring chambers, nothing is left to the discretion and judgment of the operator in charging the retorts, and this is a most desirable and necessary object in connection with a constantly repeating process, such as the charging of gas retorts.

From the receiving of the coal in the railway wagons to the deposit of the coke in the yard, none of it is actually handled by manual labor. What assistance is required in the discharging of the retorts is simply the movement of a rake by the men on the lower or upper stage, the coke itself when once disturbed quickly running down the slope. In order to ascertain the natural angles of repose of the various classes of Scottish coal, Mr. Herring advises the erection of two experimental settings of retorts at the New street works. Regarding the manipulation of materials—coal, coke, refuse, etc.—the report contains a number of suggestions. Both in the manipulation of coal and refuse, the large quantities to be dealt with in Edinburgh would, Mr. Herring estimates, warrant the expenditure of large capital sums on the plant necessary.

With reference to the condensing plant, the engineer is of opinion that the most efficient plant is that which combines the two principles of atmospheric and water treatment—first the leading of the gas through mains of large area in the retort house (by which means the temperature is gradually reduced, and the heavy, tarry matters and oils deposited, owing to the gentle flow of the gas through a main, which should be of at least twice the area necessary to convey the quantity of gas); and, secondly, conducting the gas to a water-tube condenser.

The report further deals with the washers and scrubbers and the purifiers. The purifiers, which will be contained in an iron building, will be divided into two complete sections, each for 3,000,000 cubic feet of gas per day. As the British gas engineer is the pioneer of modern gas-holder construction, it was not expected that anything of advantage would be seen on the Continent in this respect. Instead of using heavy rolled joists and built-up girders, trellis-work structures are the rule;

and whilst there is no more metal employed to obtain the necessary stability in the British practice, the open trellis-work girder, whether it be applied to a roof, bridge, or any other structure, of necessity looks much lighter and is undoubtedly more elegant than the plain rolled joist or built-up girder such as we employ. "Our method," says Mr. Herring, "is undoubtedly cheaper in the end; but we can not pretend for a moment to have gained anything in amenity or artistic effect."

Regarding the provision of plant for the working up of residual products, the wisdom of going very largely into the chemical trade, so far as it affects gas works, is one which depends upon locality and trading facilities for buying and selling the various products. At present, they can not exactly determine these facilities; and therefore, under the circumstances, Mr. Herring does not think it would be wise to immediately undertake the erection of tar-products works nor the manufacture of acids. He, however, proposes that the commission manufacture the ammonia compounds and arrange the works so as to be capable of producing either sulphate of ammonia, muriate of ammonia, carbonate of ammonia, or concentrated ammonia solutions, the plant to be arranged in such a way that either or any of these can be worked at will, and by having the four processes, we could trim our sails to the market conditions. During the distillation of ammoniacal liquor, there is usually a large quantity of sulphur given off, and it is possible to recover this in a marketable form. It would therefore be wise to provide for a sulphur recovery plant in connection with the ammonia products works.

In connection with the works, it would be wise to provide the necessary accommodation and institute a social club, with reading rooms, etc., where the men could spend their leisure time, more particularly after working hours, and procure refreshments of some kind under proper restrictions and regulations.

The public lighting of the various towns and cities visited was an object to which particular attention was paid. As regards gas lighting, no city or town was found to be so miserably lighted with gas as our own towns of Edinburgh, Leith, and the surrounding districts. On the other hand, no town was seen where the electric light was used to so great an extent as it is in the main streets of Edinburgh.

The consumption of gas per lamp in our district is 2 feet per hour; in most other towns it is 5 feet per hour. Evidently, the continental authorities are not enamored with the arc electric lighting to the extent that they were at one time, and from inquiries which were made from the authorities in several cities, the reasons given were that the incandescent gaslight was more effective, by giving a more even distribution of light over the streets, and, further, it was more economical. The object to be aimed at in street illumination is to get a uniform flood of light over the pavement and the street and the avoidance of shadows. This can not be accomplished by putting up high-power lamps at long distances apart, for with such, there are bound to be zones of light and shade. The only way to insure uniformity in this respect is to divide the light centers over the spaces to be lighted, and have these centers of medium power. This can undoubtedly be accomplished by the incandescent gas lamp or even the cluster burners of the ordinary type.

NEW USES OF GLASS.

Early in October, 1898, a paving company of this city began laying on the rue de la République a piece of pavement of ceramocrystal, ceramic stone, or devitrified glass. During the months of November and December of 1898 and thus far in January, 1899, this pavement has been driven over during all hours of the day and night. It has stood as hard usage as any pavement could be subjected to during that time, and is still in an admirable state of preservation. The glass, or ceramic stone, pavement is laid in the form of blocks, 8 inches square, each block containing sixteen parts in the form of checkers. These blocks are so closely fitted together that water can not pass between them, and the whole pavement looks like one large checkerboard. Like all thoroughfares in France, the roadbed slopes gently to the walk on each side. Some of the edges of the checkers have been broken off during their three months' service. I counted some twenty of them that have been slightly chipped on the edges. It is contended, and I think with justice, that this does not argue against the value of the material as a pavement, and that any kind of stone would have suffered just as much or more in the same time.

I visited the Ceramo-Crystal Manufacturing Company's works yesterday, at the suburban village of Demi-Lune, about 6 miles from Lyons. The factories cover nearly 8,000 square yards of ground. Work is now stopped in them while additions are being made to the buildings in the shape of second stories. In the yards are many tons of broken bottles, which the superintendent told me was their "raw material." On the four sides of a large brick smokestack are specimens of ceramo-crystal for buildings and interior decoration, some of the pieces as smooth as highly polished marble, others being rough, like cut stone, and still others having a surface like common brick. I inclose a design* for the front of a house, showing several of the patterns seen on blocks in and around the works.

The advantages attributed to this ceramo-crystal by the manufacturers are: As a pavement, it has greater resistance than stone; it is a poor conductor of cold, and ice will not form upon it readily; dirt will not accumulate upon it as easily as upon stone, and it will not retain microbes; it is more durable than stone and just as cheap.

The Central Architectural Society of France made a report recently on this ceramic stone, of which I give a brief synopsis: An

*Filed for reference in Bureau of Foreign Commerce, Department of State.

officer of the society reported that he had examined a square, suitable as a pavement or floor for a stable, a courtyard, or factory; a block imitating polished marble; a block imitating mosaic; and a panel with molding and ornamentation. He said:

From the various forms in which this material is presented, its use can be readily determined for both practical and decorative purposes.

On careful examination, it is found that the Garchey ceramic stone is nothing but glass brought to a special molecular condition. In a certain sense, it constitutes a new substance which resembles flagstone, granite, or marble. The manufacturer assures us that with this material he can copy any model that is presented.

This new product is obtained from broken glass heated to a temperature of 1,250° and compressed in matrices by hydraulic force. The physical transformation of glass is due to devitrification under the Garchey process. The phenomenon of devitrification produces a sort of dissolution more apparent than real; for, upon chemical analysis, the devitrified glass preserves the identical composition of natural glass.

It may be said, then, that devitrified glass possesses all the intrinsic qualities (physical and chemical) of glass, except the transparency, while taking on an entirely different aspect. Furthermore, glass treated under this new method is made to resist crushing, frost, and heavy shocks, and to stand usage.

This subject is being discussed in the press and is receiving general consideration. An elaborate and exhaustive article in the *Revue des Deux Mondes* for November treated the question under the heading of "A glass house," the writer asserting that a large house constructed entirely of glass would be an attractive feature of the coming world's exposition in 1900. He said that glass could be used for tubes, pipes, vats, tiles, smokestacks for factories, and for buildings. Double glass walls in a house would admit of the circulation between them of cold or warm air, thus regulating the temperature. "As to the resistance of such a structure, it would certainly be equal to that of the most solid houses of the day, * * * and it is lighter and less expensive than brick." "The Garchey glass stone had hardly come into existence before a method of using it, both simple and inexpensive, was revealed by the device of the American inventor Golding."

The glass house, or the luminous palace, which it has been decided to build on the grounds of the 1900 exposition, parts of which are now being constructed, is thus described by the writer last quoted:

The principal façade, in the form of an immense portico, its roof surmounted with spires and with a winged statue representing light, will be supported by heavy columns. The ground floor, reached by a double flight of stairs, will be used as a great exposition room. To the right and left will be large glass basins, overhung by grottoes of glass. In the interior of the hall will be five large openings, in which will be represented the five divisions of the globe.

JOHN C. COVERT,
Consul.

LYONS, *January 28, 1899.*

ARTIFICIAL SILK FROM GELATIN.

From a competent source, I am informed of a new artificial silk that is manufactured from gelatin, an invention of Professor Hummel, of Yorkshire College, in Leeds, England. The process of manufacture is said to be as follows:

A reservoir containing gelatin is kept heated at a certain temperature, to keep the gelatin in liquid form continuously. The top of the reservoir contains numberless small openings through which the gelatin oozes in very fine streams. An endless chain of a strip of linen cloth running over pulleys receives this liquid; and before the chain has traveled far, it is dry and presents a fine thread of uniform thickness and brilliant surface, ready to be wound upon spools.

The whole apparatus requires little attention; the only thing to be looked after is to change the fully wound spools for empty ones. A single workman can oversee ten apparatuses as described, which will produce about 470,000 yards of threads per day—equal to a silk production of 24,000 cocoons. To make the gelatin threads proof against being dissolved in warm water, they are lightly wound on drums and submitted to the fumes of formaldehyde in a closed room for several hours. The result is not only their power of resistance to water, but also to any other solution.

The coloring, if wanted, is added to the liquid gelatin at the beginning. It absorbs dye readily and the brilliancy of the thread is not affected. The proportion of dyestuff is stated to be 15 ounces in 330 pounds of liquid gelatin, if a bright color is wanted; but for the present fashionable pale colors, the 15 ounces would do in 6,600 pounds of liquid. A drawback against the usefulness of the gelatin silk would be its low degree of firmness in the thread, but in a mixture with real silk or fine linen or cotton thread, a durable tissue could be produced. It is estimated that the gelatin silk could be produced at about \$1.15 per pound. Collodion silk costs at present from \$2.25 to \$2.85 per pound, while natural silk reaches \$6.25 per pound. How correct these figures are, I can not tell; but the fact is that Professor Hummel has produced gelatin silk threads and has submitted his products to Swiss silk manufacturers for their judgment.

ADOLPH L. FRANKENTHAL,

BERNE, *January 10, 1899.*

Consul.

STRIKE OF CREFELD WEAVERS.

The weaving industry of Crefeld, in the main, consists of the manufacture of silks and velvets. Within the city limits are located 78 silk factories, 26 velvet factories, and 11 which manufacture both silk and velvet. There are also 9,566 handlooms for the manufacture of silks and velvets in the homes of the weavers of the city. It was not the purpose of the participants in the recent strike to attempt the settlement of any disputes arising outside the city limits; at least, this is the understanding of outsiders. The dyeing industry of the city is intimately connected with the weaving. The large establishments for dyeing are everywhere in evidence, the city containing 44 of them. In short, the commercial life of this city of 110,000 inhabitants is wholly dependent on these industries.

When I say that the weavers' strike has been the subject of much anxiety on the part of the business men of the city for the last few days, coming as it did so near the holidays and at the beginning of the winter, I am not magnifying the importance of the subject to the people of Crefeld. To the weaving industry the city owes its origin, the Menonite weavers having been encouraged to locate themselves here by the Duke of Cleve when life as well as weaving had been made a burden to them in Holland by the Spanish inquisitors; and were it not for this little circumstance, perhaps Crefeld would still have been what it was at that time and what its name signifies—a crow field.

The strike first took place among the silk weavers and seems to have arisen from the fact that the wage system was not uniform. There were a few firms paying a much higher rate than that paid by the majority of mill owners. In the factory where the strike first occurred, it appears that during the summer months when business was brisk the employer had paid a certain percentage of the profits to his employees; but when trade fell off, he ceased to pay this percentage, a fact which the weavers thought a sufficient encroachment on their rights to provoke a strike. They accordingly ceased work.

About this time, the manufacturers discovered that the plan of the weavers was this: The employees of but one firm should strike at a time, and these should be supported by those who continued to work, till the grievances of the first were settled; then another establishment should be invited to adjust its differences with its weavers, and so on, till all petty differences were settled, the striking weavers being supported by those still at work. After this discovery, the man-

ufacturers entered into an agreement among themselves as follows: Notice should be given to all silk weavers that unless the strikers returned to their work within fourteen days, all silk factories would be closed. This notice was printed in the local papers and posted in the mills. The weavers concluded not to wait for the fourteen days to expire, but walked out. This action brought things to an issue immediately. Meetings were held by the manufacturers and by the weavers; then there were joint meetings every day and night for ten days. At last, they resulted in the appointment of a committee consisting of two members from each of the three weavers' unions to meet the committee of silk manufacturers, with the deputy mayor as chairman. They agreed upon a three months' truce, with the following agreement by which they should be governed during that time:

(1) Work shall be resumed on Tuesday, the 20th of December, under the following conditions, to which the employees and employers agree.

(2) The employees bind themselves to enter into no strike of any nature during the three months' truce. Should differences arise in individual mills which can not be adjusted by direct negotiation, they shall be acted upon by a mixed commission, which shall be appointed after three days. The employees are allowed to make demands, but shall not allow a strike.

(3) The manufacturers bind themselves to order no general lockout during the truce.

(4) The employees bind themselves not to molest the workmen who return and remain at work, and not to demand their removal; in consideration of which the manufacturers bind themselves not to inflict punishment on the weavers who were in the strike.

(5) The manufacturers bind themselves not to make any reduction in wages during the three months' truce.

(6) The joint commission, composed of the representatives of the three unions and the manufacturers, are to strive for a common union between the manufacturers and their employees, to the end that a ten-hour-a-day system be adopted, the payment by the card system be abolished, and the payment by the meter be adopted, and a minimum wage system be worked out.

(7) Should these conditions be broken by either party, the other is no longer bound by them.

I have given a translation of the agreement as published in the daily papers. I understand the card system referred to in the agreement is this: When putting in the warp for weaving, cards are attached to the warp 60 meters apart. When these 60 meters are woven, the weaver takes out his card and is then paid for 60 meters, or receives a part payment; but each card finally brings him pay for 60 meters. Sometimes, owing to the stretching of the warp in the process of weaving, the piece woven may run a meter or two over the sixty; so that under the system of card payment, the weaver did not always receive payment for the full amount he had woven.

It seems to me that the Crefeld weavers' strike of 1898 should

have a peculiar interest for our people, on account of several features which differ remarkably from similar disturbances that have taken place in the United States.

(1) While there was great anxiety and excitement on the part of merchants and other business men of the city, as well as manufacturers and weavers, lest the strike continue over the holidays, if not all winter, thus paralyzing the business of the city, there were no gatherings on the streets, no heated discussions of the pending trouble in public, no disturbances of any kind. In fact, so far as the general appearance of the city was concerned, nothing out of the usual order was noticeable.

(2) I am unable to learn that any disturbance of any kind took place during the days that the strike was pending. In fact, I am credibly informed that no disturbance did take place.

(3) No threats or force was used by the strikers to prevent any weaver from returning to his loom.

JULIAN PHELPS,
Consul.

CREFELD, *December 28, 1898.*

FEMALE AND CHILD LABOR IN GERMANY.

It appears from the publications of the imperial office for statistics, that the extraordinary development of German industry during the last few years has brought about a considerable increase of female labor, as well as an increased employment of children, both in factories and in house industries.

The fact that a report of mine rendered some years ago upon the same subject attracted public attention in the United States, induces me to refer to it again.

The following table shows the number of factories employing work people, together with the ages and sex of the employees, for 1896 and 1897:

Description.	1896.	1897.
	<i>Number.</i>	<i>Number.</i>
Factories employing work people under age.....	40,339	43,593
Factories employing female laborers of 16 years of age and upwards.....	32,823	35,539
Young people of 14 to 16 years employed:		
Males.....	159,214	172,394
Females.....	80,334	87,173
Children under 14 years of age employed:		
Males.....	3,343	3,770
Females.....	1,969	2,381
Women employed.....	699,579	732,909

The number of married women is not given.

According to the census of 1895, there were 1,044,962 females employed in industrial enterprises in Germany, of whom 140,840 were married. The total number of women employed in 1882 was only 583,830.

The reports of the factory inspectors commissioned by the Imperial Government show that, especially within the last few years, German female workers have forced their way into spheres of labor which up till then had been reserved to males. Thus, it was observed last year, for the first time, that young girls are not infrequently employed in establishments for the manufacture of glass instruments, where formerly males were exclusively employed. The desire to reduce the cost of production leads everywhere to an increase of female labor.

Still worse, says the Frankfort Gazette, is the chapter on infant labor in Germany. The German law of 1891, for the protection of artisans, caused a material reduction of infant labor. Since then, it has increased again.

There were employed in German factories—

Year.	Boys.	Girls.	Total.
1886.....	13,529	7,514	21,053
1888.....	14,738	8,175	22,913
1890.....	17,254	10,231	27,458
1892.....	7,315	3,807	11,212
1893.....	3,730	2,181	5,911
1894.....	2,682	1,577	4,259
1896.....	3,343	1,969	5,312
1897.....	3,770	2,381	6,151

The little ones are, for the most part, employed in the so-called house industries, viz, winding yarn, making baskets, threading needles, making cigars, etc. It is stated officially that in the Voigtland (Saxony) children down to the age of 5 and 6 years are employed in the "flat-stitch trade," which is carried on in that part of the country, and the products of which are brought to the American markets in large quantities. These children earn about 2¼ cents an hour, working from eight to ten hours a day.

There can be no doubt that the physical and mental development of the children is materially handicapped by this kind of employment, and that most regrettable sacrifices of human life are made to the victorious German industries.

LOUIS STERN,
Commercial Agent.

BAMBERG, *January 7, 1899.*

INDUSTRIAL FAILURES IN GERMANY.

Significant and interesting statistics concerning the number of failures in 1895, 1896, and 1897 have just been published. They offer excellent material for making comparisons, and enable one to judge pretty accurately of industrial movements. They indicate, almost infallibly, the prosperity or adversity of a particular branch.

Description.	Year.		
	1897.	1896.	1895.
Agricultural.....	523	430	472
Metal workers.....	204	220	232
Plumbers.....	38	55	49
Locksmiths.....	43	43	90
Machine builders and instrument makers.....	182	187	190
Textile industries.....	150	119	118
Paper industries.....	45	53	62
Leather industries.....	87	117	107
Wood-working industries.....	288	267	287
Bakers.....	242	244	237
Tailors.....	163	169	199
Clothing makers.....	133	158	171
Shoe manufacturers.....	344	277	302
Builders.....	335	304	288
Merchants.....	2,790	2,731	2,845
Merchants dealing in agricultural products.....	95	55	74
Total.....	5,662	5,429	5,782

These figures show a decrease in the number of bankruptcies during a period of increase in population and in number of industries. Agricultural enterprises show a dangerous increase in failures. Bankers and business men are by no means so eager to assist purely agricultural enterprises as they are mechanical and commercial ones. These agricultural failures are made up of the comparatively small firms. No very large concern was involved. These, as a rule, are too strongly intrenched to permit of failure. Another exception is the increase in the number of textile concerns that failed. This is due not only to the tariff bill of 1897, but to the increasing capacity of the United States to supply its own wants and to export to other countries. The shoe trade shows an interesting increase. Is it not possible that America's wonderful progress and prosperity in shoe-making is responsible for this? The reasons given here are that the big mills are "eating up" the little ones. This, to a certain extent, is undoubtedly true. An indirect cause of many failures is the un-

precedented building speculation. The commercial industries, as a rule, are safe and sound. This is due to a more discreet giving of credits and to a better system of finding out the financial standing of firms.

J. C. MONAGHAN,

CHEMNITZ, *January 12, 1899.*

Consul.

SALT IN GERMANY.

According to the German customs department, the quantity of salt taxed in the last two years was:

Variety.	1898.	1897.
	<i>Tons.</i>	<i>Tons.</i>
Rocksalt.....	679,438	658,523
Salt from brine.....	545,587	535,942

During the past ten years, the production of rock salt has doubled, whereas that produced from brine has increased but 7 per cent.

The quantity of salt imported and exported was as follows:

Description.	1898.	1897.
	<i>Tons.</i>	<i>Tons.</i>
Imported	22,365	22,586
Exported.....	217,854	199,709

The quantity of table salt used during the year amounted to 419,999 tons, or 7.8 kilograms (nearly 18 pounds) per capita.

The quantity of untaxed salt utilized for technical and agricultural purposes was 607,374 tons, or 11.2 kilograms per capita. This quantity was distributed among various industries as follows:

	<i>Tons.</i>
Soda and Glauber salt.....	319,676
Chemical and color works.....	83,622
Leather manufacture.....	28,831
Metal-ware industries.....	32,767
Fed to cattle.....	114,236
Fertilizing materials.....	3,652

WALTER J. HOFFMAN,

MANNHEIM, *December 13, 1898.*

Consul.

SALT INDUSTRY OF RUSSIA.

Consul-General Holloway sends from St. Petersburg, January 10, 1899, the following translation from the Messenger of Finance:

The first meeting of the Russian salt producers was held in the Ministry of Agriculture and Crown Domains at St. Petersburg, November 4, 1898.

In addition to the well-known Crimean salt mines, one of the richest beds of rock salt is the Bakhmut district of the Donets basin, where salt has been produced regularly since 1881, increasing yearly and amounting in 1897 to 19,000,000 poods (306,451 tons). The beds are worked the whole year, and, owing to favorable conditions and the high quality of the salt, this district is successfully competing with all the other salt mines of Russia. The salt works near Bakhmut and Slaviansk, which produce salt from wells, are also well known, their production having amounted in 1897 to 80,645 tons.

In northern Caucasus, salt is produced in small quantities from small lakes. There are a few salt lakes in the government of Baku, the annual production of which amounts to 8,064 tons.

In the Erivan government and Karsk region, rock salt is produced only from large beds which run along the Russo-Turkish-Persian frontier, 398 miles along the Russian territory. In some places, these beds occupy an area about 1 square mile and 280 feet thick, which shows that they are very rich. The production of salt in that region does not exceed 32,258 tons per year, but there is reason to expect that after the construction of the Kars Railroad, with a branch to Erivan, the trans-Caucasian salt will find its way to the Russian markets, and the productiveness of the local mines will increase.

The trans-Caspian region produces 24,194 tons of rock salt, and a like amount of lake salt comes from Turkestan annually.

In Poland, salt is produced only in the Tsekhotsensk factory, which belongs to the Russian Government and lies near the Prussian frontier. At present, this factory is leased by the heirs of General Glinka-Mavrin and produces but 4,839 tons, whereas 94,839 tons are required to supply the demands of the Polish governments.

In Siberia, the production of salt is comparatively small—from 32,258 to 48,387 tons a year. This is principally due to the fact that the salt-bearing regions are far from the markets, and to the absence of convenient ways of communication. It is therefore not surprising that salt is brought to Siberia partly from European Russia (through Odessa) and partly from America. Thus during the past fall there was such a demand for salt in eastern Siberia that the Ministry of Agriculture sent by rail, via Omsk to Irkutsk, 1,613 tons of salt from the Koriakov Lake, in eastern Siberia. In western Siberia, salt is produced from salt lakes, and in eastern Siberia it is produced by decocting brine. There are in the Jakutsk region well-known rock-salt deposits; but, until now, they have not been worked, as they are very far from inhabited localities. The prices of salt in Siberia are exceedingly high, amounting to \$57.47 per ton; whereas in European Russia the price fluctuates between \$12.77 and \$3.19 per ton.

The Russian salt industry began to develop as an important industry in November, 1880, when by an imperial ukase the excise duty on the same was abolished. Thus, during the ten years 1871-1880, while the excise was still in force, the pro-

duction of salt in Russia did not exceed 693,548 tons, and from 1888 to 1897 it amounted to 1,209,677 tons, nearly double, and the prices decreased accordingly.

The import of foreign salt has also decreased greatly, amounting at present to but 8,065 tons per annum, which go principally to the Baltic region and Poland. During recent years, salt from the Donetz basin has found its way to the above regions, and therefore it is to be expected that the import of foreign salt will become still smaller.

RELIEF OF AGRICULTURAL DISTRESS IN RUSSIA.

Referring to my cablegram of September 8,* I inclose a translation of the report of the committee of the Russian Red Cross Society in the *Pravitelstveny Viestnik* (the official gazette) regarding the condition of the harvest in the various European Russian provinces and the means taken by that society to relieve the suffering caused by the failure of the crops in many of these provinces.

I deemed it proper, however, before forwarding this report, to confer with the Imperial Minister of Foreign Affairs, Count Mouravieff, with the view of ascertaining its correctness and whether he had any objection to its being made public in America in order to, if agreeable to His Excellency, endeavor to enlist the sympathetic action of our people who responded so generously several years ago under similar conditions.

His Excellency, after courteously thanking me for the sympathy which was the basis of my inquiry, explained that the report of the committee of the Red Cross Society was practically official, as it was through the instrumentality of that society that the Imperial Government was caring for such distress as might arise from the failure of the crops, inasmuch as direct governmental action might create among the peasant class a feeling that it had the right to demand, rather than to request, assistance from the Government, even when the need for such assistance was occasioned by their own laziness as well as by the failure of the crops; the desire and intention of the Imperial Government being to force upon the peasantry, even at the expense of some suffering, habits of industry and thrift. With this object in view, His Excellency further informed me that the contribution made by His Majesty the Emperor personally, as well as by the Imperial Government, had purposely been very much understated in the report of the committee.

His Excellency says that the great difficulty in caring for the prevalent distress in some of the provinces arose from the lack of facilities for equalizing the abundance and scarcity of food products

* See "Failure of harvest in Russia," CONSULAR REPORTS No. 218 (November, 1898), p. 388.

in the various provinces, a difficulty which he hoped would soon be overcome by the early completion of internal improvements now under way.

Fully appreciating the friendly assistance so cheerfully rendered by our people in the past, and thanking me for my inquiry as to whether it would be agreeable to the Imperial Government for such action to be repeated, His Excellency informed me that the Imperial Government was quite prepared to meet, and was caring for, the present emergency.

ETHAN A. HITCHCOCK,

ST. PETERSBURG, *January 5, 1899.*

Ambassador.

[Translation.]

The bad harvests of grain and hay this year were in seven eastern and two central governments of European Russia, viz: Kazan, Viatka, Oofa, Samara, Simbeersk, Saratov, Perm, Riazan, and Toola—more especially in the governments of Kazan, Viatka, Simbeersk, and Oofa. As soon as the Ministry of the Interior, in July, informed the Red Cross Society of the bad harvest, the society instructed their branches to ascertain all particulars.

The first bad news, which was received in August, compelled the committee to take action without waiting further particulars. For this purpose, all the offices of the society at once opened subscription lists for the needs of the unfortunate people, and the officers in the bad-harvest districts were requested to assist in accordance with instructions given by the committee. As in previous cases, when the Red Cross had to wage war against poverty, people of all positions were approached in the endeavor to obtain their help in the good cause. In cases where no branch of the Red Cross Society existed, local committees, depots, etc., were formed. In order not to encourage laziness, the branches were instructed not to help those who declined to work and only those who were really in need; furthermore, the branches were requested to keep a sharp lookout as to sanitary conditions, so that should an epidemic break out, the society could at once come forward with medical organization.

When the society first commenced to help those who had suffered through the bad harvest this year, the following money for this purpose was at its disposal:

	Rubles.
Head office.....	151, 182=
Branches.....	\$77, 859
	241, 596=
	124, 422
Total.....	392, 778=
	202, 281

As the committee saw that there would otherwise not be sufficient money, they loaned 200,000 rubles (\$103,000) from their reserve capital. On the 11th of November, the Emperor presented the sum of 500,000 rubles (\$257,500) to this fund.

Eating houses have been opened, children furnished with clothing, medical assistance rendered, and work secured, as far as possible, for those who are able to labor.

CULTIVATION OF TEASELS IN EUROPE.

In compliance with the request of a Boston editor,* an instruction was sent by the Department, under date of July 20, 1898, to consular officers in France, Germany, Great Britain, and the Netherlands, requesting reports on the cultivation of the teasel plant. The replies received are given below.

FRANCE.

Commercial Agent Atwell, of Roubaix, on September 23, 1898, writes:

I have made many inquiries with regard to the use of the teasel plant for industrial purposes. Its employment seems to have been abandoned in this region, the work being now done by machinery. I inclose an extract on its cultivation, taken from a publication of some years ago:

THE TEASEL PLANT.

The teasel plant must not be confounded with the common thistle of Europe which sows itself and chokes other growths. The teasel, known as the hosier's thistle, has a very tall stalk, which, in the south of France, is often from 5 to 6 feet high; the curving, hook-like projection in the thistle tops renders them suitable in the highest degree to the work of carding. The root is fibrous and fusiform; the stalk hollow, grooved, and thorny.

The teasel, as a rule, dies the second year after ripening its seed. It rarely lives three years. It requires well-manured and deep soil, as its root strikes far into the ground. It demands all conditions necessary to plants used for industrial purposes, viz, deep, rich, and highly-manured earth, which will bring forth a fine blossom, the thistle tops being the only part of the plant found serviceable for fulling. The heads should be gathered at maturity when they have reached their maximum growth. The yield depends not only on the soil, but on the space given to each plant. The larger the space the better the yield.

GERMANY.

BARMEN.

Under date of August 15, 1898, Consul Bouchsein, of Barmen, says:

The teasel (*Dipsacus fullonum*) has a peculiar place among plants, as it does not furnish raw material to be worked over in useful articles; but its crown is utilized in the manufacture of woollen goods.

The home of the teasel plant is southern Europe; but the culti-

* To whom Advance Sheets of the reports have been sent.

vation has greatly diminished in late years, the steel brush having taken its place.

In former years, the market value of the German teasel plant was from 5 to 6 marks (\$1.19 to \$1.42) per thousand; now it is from 2½ to 3 marks (59 to 71 cents), and naturally, the number of teasel farmers is greatly reduced.

The southern France or Avignon teasel, raised near St. Remy and also in the department of Vaucluse, is far superior to the one raised in southern Germany, on account of the hardness and durability of the single hooks and teeth, owing to its greater mineral percentage.

Inquiries made by me at the departments of agriculture of the different provinces of Germany reveal the fact that teasel culture in Germany has fallen off to such an extent that its product is no longer mentioned in the agricultural market reports, and therefore exact figures as to production, etc., are not obtainable.

PLAUEN.

Consul Peters, of Plauen, under date of October 26, 1898, says:

The teasel plant is a biennial of the thistle family. In the first year, it produces leaves; in the second year, stems, which reach a height of 6 feet, surmounted by thistle heads.

In Saxony, there are but two kinds, viz, the *Dipsacus sylvestris* and *Dipsacus pilosus*, both of which grow wild.

There is a marked difference between the German and French plant; the last is smaller, has fewer branches, and consequently a less number of thistle heads. Notwithstanding this, the French plant is much better than the German, its firmer quality permitting of its being used four or five times. It is generally 50 per cent higher in price than the German.

Dr. Heine is of the opinion that the French plant is finer, on account of the soil, climate, and its preparation. Avignon, in France, where the best plants are raised, has a clay soil, mixed with gravel; such soil is the best for the teasel. The climatic conditions in France are better, and the cultivation of the plant there more successful than in Germany.

In France, the stalk is cut, but not quite through, so that the thistle tops hang to and dry on the stalk; for this reason, they are better cured and much more elastic and tough than in Germany. In Germany, the custom is to dry the thistle in ovens. In comparing the Avignon with the German teasel, it will be found that the bracts or prickles of the French plant are more horizontal, the German being more or less bent. It is believed that the French plant is a special variety, and that even if French seed were planted in

Germany, the plant would retrograde and become the ordinary German plant. Yet Dr. Löbe says: "If this were true, the cause of failure could be only the climate, as Germany has the same quality of soil as that about Avignon, and the plant could be handled in the same way as in France." It has been found that when the same methods have been followed in Germany in handling the product, it closely resembles the French.

The best soil for the teasel is moist clay. In such a soil, the plant becomes finer, stronger, and more regular than in rich loamy earth. The soil should not, however, be filled with water, but well drained, otherwise the plant will rot.

Clay mixed with sand forms a very good soil; if it has a slight mixture of lime, it will improve the teasel materially. Very rich soil is not desirable, as the bracts on the heads of the thistle will become too rough and will not have the required strength and elasticity. Sandy soil alone, if not too light, and if it has the required plant food, forms a very good bed in which to cultivate the teasel. The plant requires exposure to moderate wind and sun for its proper ripening and its separation from the wilting stock. It must not be exposed to strong winds, as they do much damage. The teasel is also unfavorably affected by very dry weather. The best results may be expected where the soil is moderately moist and the plant is protected from high winds. The plant does well in almost any mild climate; it only freezes in regions where it is not covered by snow, at a temperature of 2° F. above zero.

The teasel thrives best when planted as a second crop in strong soil, after the land has been manured. In very rich soil, with a mild climate, it would be well to plant the teasel as the third crop after manuring. The earlier it is placed in the ground the better. About the end of July is a proper time to plant the thistle.

The best fertilizer is lime and compost; in the spring, ashes and salts of dung. It must, however, be remembered that the plant must not be manured with ordinary barnyard manure. If this is done, the thistle would grow to a great size, but would not have the elasticity required in its bracts. Such manure should therefore never be used.

The cultivation of the ground must be very deep and carefully attended to, in order that the long roots of the plant may sink as deeply as possible. The French seed is the best. The plant can be cultivated in small beds and then transplanted to the fields. The seed may be sown broadcast; in France, it is generally planted in rows.

The advantage resulting from planting the teasel after another crop has been harvested is that the ground is in better condition and that there are fewer weeds to contend with.

Should the farmer wish to save plants from the seed, the ground should be prepared in the early spring and all weeds carefully removed. The ground should then be furrowed, so that the hills cast from the furrow are 20 inches apart; then rolled, and marked with a four-spiked marker, the spikes to be about 1 foot apart. The seed should be planted by hand, half an inch in the ground. To every German morgen (0.63 acre), there should be used 4 pounds of seed; so that there should be, roughly calculating, about 7 pounds used to our acre.

As the teasel takes two years to come to perfection, it would be well, in order to save expense, to plant some annual, such as dwarf pease, which could be placed between the rows of the teasel, thus materially reducing the cost of cultivating the teasel.

Should bald, dry places in the teasel field be noticed, they must be at once replanted with plants from a forcing bed, which must be held in reserve for such an emergency. As soon as the plants are well set and the earth becomes dry about them, the cultivator should be run through to loosen the earth and remove the weeds. This naturally applies only when the plants have been set in rows. Should any of the plants bloom in the first year, the blossoms must be taken off, care being taken that this is done in warm weather.

In the second year, when the plant has shed its leaves, the stalk should be cut to within 1 inch of the ground. From this will grow the side branches, on which the real thistle head is found. It is also better to cut away all uneven growth of branches.

In the spring of the second year, the stalk develops, and three or four ringed growths appear; from these spring branches, which bear the bloom, or thistle head. On each one of these rings, two leaves sprout. These will gradually unite and form the branch; but when young, they form a sort of cup, in which the rain water is held. This will foul the plant, if not removed. It is well after a rain storm to visit each plant, and with a sharp knife cut each of these rings, so that the water in the miniature cistern is liberated. Until the harvest time, nothing further must be done to the plant. The teasel has many enemies—black frost, frost over 2° F. above zero, and sudden change from cold to warm weather, followed by frost. The fields intended for the plant should be protected as much as possible, and the surface of the field even or flat. Another enemy to the teasel is mildew, which may completely destroy it, should it attack the plant when it is in full bloom. Mice also do much damage by feeding on the roots in winter when it is covered with snow.

The plant begins to bloom, from the top downward, about the end of June or first of July. When the bloom crown is about one-fourth opened, the plant is ripe and should be cut. This is generally

done about the end of July or first of August. Many allow the plant to bloom fully, as, if it is cut too soon, the bracts may be too soft and unelastic. The crop must be harvested with great rapidity or the thistle will lose its color and elasticity, and will not be prime for the market. The harvesting should be undertaken only in dry weather.

To dry the thistle, the heads should be thinly scattered on a well-aired surface. Particular attention must be given to the manner in which the thistle head is placed for drying, as no thistle should be on top of another. The better method is to dry the thistle in sheds, about 12 feet high, with sides built of slats, and with seven or eight shelves or compartments on which the thistles are placed. The drying takes about fourteen days, and the seeds, through this process, are liberated from the head and fall out.

The seed which falls from the dried thistle can not be used for planting, as it is from the unripe plant. The proper seed may be obtained by letting as many plants as the farmer may require for seed purposes dry on the stalk.

The collection of the seed is attended with difficulty, as it is not ripe in each head at the same time. The seed ripens first on the uppermost head of the plant, and so on until it reaches the lowest heads. The ripe seed should be taken home and placed on a floor to dry.

I have given the above description of the teasel plant and its cultivation from an article written by Dr. William Löbe, this being the most reliable information I could obtain. I trust that the translation is clear enough to be of use to anyone wishing to undertake the cultivation of this plant.

With regard to the present use of the teasel in manufacture, I find that it is considered absolutely necessary in the finer qualities of cloth. It is true that a machine has been invented which has possibly, to some extent, taken the place of the plant; but it is employed only for the lower grade of goods, where the mixture contains much wool and cotton. The machines are manufactured by Deprue, at Stur, in Mecklenburg, and by Thomas, in Berlin, and cost about \$952 to \$1,090 each.

The cultivation of the teasel in Austria and Germany amounts to about 150,000,000 to 160,000,000 heads per year, which are sold at the rate of from 49 to 71 cents per thousand. From France, there is imported a large quantity.

Letters and other documents I have received from the dealers and manufacturers corroborate Dr. Löbe's assertion that the best teasels come from France, especially Avignon.

SUMMARY.

From all the information I have received from various parts of Germany, there is no doubt that the large preponderance of evidence is in favor of the plant against the machine, and that the machine can take the place of the teasel only for the most ordinary materials; that the best seed and plant come from France; that, while the cultivation is difficult, it is profitable if conducted with care and knowledge.

I regret that the teasel is not grown in this district, as I could have given more detailed information if I had personally inspected the various conditions under which the plant is cultivated.

GREAT BRITAIN.

Consul Dexter writes from Leeds, August 9, 1898:

The teasels used here are grown both in England and in France, few, if any, coming from other countries. Some have come from the United States when the teasel crop in England failed. The greater bulk consumed here is grown in France, being harder and better matured. They are preferred from their qualities of endurance and their ability to grip and throw up the nap quickly. A softer teasel would worry the cloth, thereby producing an inferior nap and finish.

In specially favorable seasons for their growth in England, the English teasel has no superior; but in average seasons, the English and American are quite similar, both being somewhat softer than the French. Teasels were formerly sent from here to the United States.

For a few years past, there have been not more than one-fourth as many teasels consumed here as formerly, on account of the change in the character and finish of the goods now being produced.

NETHERLANDS.

Consul Corey, of Amsterdam, on August 2, 1898, says that he is informed by Messrs. Groenewegen & Co., one of the largest horticultural and agricultural firms of that city, that the teasel plant is not cultivated in the Netherlands.

SUGAR CROP OF EUROPE.

In my report of December 1, 1898,* I said that all approximate estimates of this year's sugar crop in Europe figured out a shortage of 350,000 tons, and that this was having a bullish effect upon the market. Within the last week, all this has changed. Like a thunderbolt from a clear sky, word came that the revised estimates showed a more favorable result; that both France and Austria would do much better than had been expected; and that this year's crop in Europe would practically equal that of 1897. M. Giesecker, of Brussels, one of the leading statisticians on sugar, has advanced his original figures for France, Belgium, and Austria, so that his estimates of production for the leading sugar countries of Europe now are 4,520,000 tons, instead of 4,365,000 tons, made earlier in the season.

The following table will show the result of recent changes made in this year's estimates, and also afford an opportunity for comparison with actual results of former years:

Country.	1898-99.	1897-98.	1896-97.	1895-96.	1894-95.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Germany.....	1,710,000	1,852,857	1,836,536	1,615,111	1,844,586
Austria.....	1,000,000	831,667	934,007	791,405	1,055,821
France.....	800,000	821,667	752,081	667,853	792,511
Russia	750,000	738,715	728,667	712,006	615,058
Belgium	220,000	265,397	288,009	235,795	243,957
Holland.....	155,000	125,658	174,206	106,829	84,597
Other countries.....	155,000	190,000	202,990	156,340	156,000
Total.....	4,790,000	4,825,529	4,916,586	4,285,429	4,790,532

Of course, the figures in the 1898-99 column are still approximate estimates only. Not till the last beet root has been taken from the silos and sliced, will it be possible to state definitely the amount of sugar garnered and produced in the fields and factories of Europe.

This unexpected increase of more than 200,000 tons in the estimates of the European crop of sugar beets had a rather demoralizing effect upon all continental markets. For some days, a regular panic prevailed on 'change here in Magdeburg. But, at this writing, confidence seems to be reviving, the feeling as to the situation is improving, and quotations for future sales are stiffening. All eyes are now turned to the cane-sugar countries, and estimates of their production are anxiously looked for. Much interest is also exhibited in

* See CONSULAR REPORTS No. 222 (March, 1899), p. 460.

this country as to the future development of Cuba. Owing to its small home consumption, Germany is obliged to find foreign markets for two-thirds of its production, and most of this has hitherto been exported to the United States. The great problem for many at present is: When Cuba, the Philippine Islands, and Puerto Rico increase their production of cane sugar so as to supply the United States, what will become of the large surplus of German beet sugar?

HENRY W. DIEDERICH,

MAGDEBURG, *December 20, 1898.*

Consul.

POULTRY IN BELGIUM.

In compliance with instructions from the Department of State, sent at the instance of a poultry breeder of the District of Columbia, Consul Roosevelt, of Brussels, reports,* under date of January 2, 1899:

The science of breeding all kinds of domestic animals for profit or pleasure was for centuries more advanced in Belgium than in any other European country. Poultry is bred throughout Belgium—in some localities for eggs and meat; in others, as in this consular district, for meat alone.

The breed most in favor here for general purposes is known as the "Land Van Oelst." The hens, resembling somewhat the penciled Hamburg, are prolific layers. The eggs are large, of good flavor, and produce the earliest "poulet au lait," which is marketable when six weeks old or, when grain fed, at three months. The young cocks mature early, are meaty in six weeks, and take on fat before three months; or they are caponized and kept at liberty on the farm until after the new year and sold during the months of January, February, and March at high prices. Large quantities of eggs and young fowls are exported to the cities of northern France.

The breed par excellence for the table is the "Conconde Malines," better known in trade as "poulet" or "poularde de Bruxelles."

When the chicks are about three months old, they are put in coops of special construction, preparatory to fattening for market. The coops, or cages, are 24 inches high, 20 inches wide, and stand upon four legs, 3 feet in height. The bottom is made of laths, so that the droppings may fall through. The top is an adjustable board to allow the free circulation of air. The front consists of laths placed at a distance of from 2 to 2½ inches apart. The receptacle for food is a triangular-shaped wooden box. Each coop accommodates about

*Advance Sheets have been sent to the inquirer.

twenty chickens. After the fattening period expires, the coops are thoroughly cleaned and exposed to the air for not less than fifteen days before receiving other chickens. The length of time necessary to fatten varies from four to five weeks. The best age for fattening is when the chicken is from three to three and a half months old. Younger than this, they can not endure captivity, and when older they can not become accustomed to it.

The food consists of ground buckwheat mixed with milk, forming a kind of paste, not too liquid, which is fed to them twice daily, very early in the morning and at about 4 o'clock in the afternoon. About noon, pure milk or milk mixed with a little water is given them. If the fowls refuse to take the food, they are not forced to eat, but are removed from the coop and killed; otherwise they grow thin and lose their market value.

AMERICAN COAL IN MARSEILLES.

The suggestion put forth in a recent report from this consulate that American coal might easily secure a new and valuable market in Marseilles,* quality and prices being favorable, has been followed by the receipt of numerous inquiries for further information, which are best met by a uniform reply in the form of a supplementary report. The local market is now in a most favorable condition for the introduction of American coal, as the dealers have formed a combination for the purpose of controlling the selling prices, thereby eliminating the possibility of a ruinous competition for trade, in which dealers in British coal would have the advantage of handling a product familiar to the customer. At least 500,000 tons of Welsh coal are brought annually to this port, to which must be added a large amount of coal of French origin. I am using the figure named in connection with coal arriving in bond and disposed of to the shipping interest exclusively. I think that the following letter, from a dealer of long and successful experience in this field, meets as fully as a general statement most of the other questions which have been or may be put to me on the subject:

25 RUE WOLFRAM PUGET,
Marseilles, December 26, 1898.

ROBERT P. SKINNER, Esq.,
Consul of the United States, Marseilles.

DEAR SIR: Referring to your inquiry regarding the prospects of introducing American coal in this market, as also the various charges which this article would be subject to, I beg to state that I consider the moment most opportune for promoting such a venture. The late disastrous and protracted strike in South Wales has

* See CONSULAR REPORTS No. 221 (February, 1899), p. 320.

clearly proved that the supply and quality of French coal is inadequate to cope with the requirements of so important a center of consumption. During the South Wales strike, the demand was met by shipments from the north of England and Scotland at enhanced prices. Results, however, proved satisfactory from the buyers' point of view, the quality being inferior and the consumption greatly in excess of the Welsh coal.

The qualities adapted to this market are the following:

(1) Good large bituminous steam coal, free from small, suitable for bunker purposes, yielding a moderate percentage of ash and clinker.

(2) Good small steam coal adapted to industrial purposes, such as soap works, oil crushing, sugar refineries, etc.

(3) A reliable and pure anthracite, not yielding more than 3 to 4 per cent of ash for domestic purposes, as also a cheaper class, less pure, for gasometers, etc.

The charges at this port comprise:

Bunker trade ex bond.

	Franca. Cents.
Discharging (see note).....per ton of 1,000 kilograms (2,204.6 pounds)...	1. 25=24
Custom-house statistics.....do.....	. 25= 4. 8
Lighterage, shipping, etc.....do.....	3. 00=57. 9

Inland trade, duty paid.

Custom-house duty.....per ton of 1,000 kilograms (2,204.6 pounds)...	. 20= 3. 8
Custom-house statistics.....do.....	. 15= 2. 8
Discharging.....do.....	1. 25=24
Cartage.....do.....	2. 00=38. 6
Incidental expenses.....do.....	1. 00=19. 3

Prices for contracts over next year for best Welsh coal have been established as follows:

Large, for bunkers, containing about 20 per cent of small, at from 22s. 9d. to 23s. 6d. (\$5.54 to \$5.71) per ton of 20 cwts., free on board.

Small, delivered inland, duty paid, at from 23 to 23.50 francs (\$4.44 to \$4.54) per ton of 1,000 kilograms (2,204.6 pounds).

Prices in Wales have an upward tendency, as the freight market, although quiet, is firm at 12 francs (\$2.32) per ton of 20 cwts. (2,240 pounds).

Yours truly,

A. DE NORMANN.

NOTE.—A portion of this expense is paid by the incarrying steamer.

As stated in my first report on this matter, most of the large houses in the Marseilles trade have alliances with British coal-producing concerns that prevent them from making arrangements with American companies. Nevertheless, as Mr. de Normann points out in his letter, conditions are such that new sources of supply must be investigated and made available. The following are the leading persons and firms now handling coal in this city: A. de Normann, 25 rue Wolfram Puget; Worms & Co., 6 rue Beauveau; Watson & Parker, 8 rue Beauveau; Savon Frères, 25 rue de la Republique; A. Brun, 17 rue Beauveau.

The matter of ocean freights will be the most difficult point to adjust satisfactorily in attempting to sell American coal in France;

but, by making time charters and studying the situation, it seems reasonably certain that the freight question can be made to yield to treatment. It is obvious, moreover, that if American coal can be sold at a profit in Marseilles, there are other Mediterranean markets equally accessible.

ROBERT P. SKINNER,
Consul.

MARSEILLES, *December 28, 1898.*

COAL IN SUMATRA.

Consul Everett sends from Batavia, under date of November 25, 1898, a report on the Ombiliën coal fields in Sumatra, written by Mr. Haacke, consular agent at Padang. The Ombiliën coal fields, says Mr. Everett, are a few miles inland from Padang and are owned and worked by the Dutch Government.

LETTER FROM CONSULAR AGENT HAACKE.

I inclose chart* of the coal fields, showing estimate of the quantity of coals to be found there in the different parts, viz: Soengei Doerian, 93,000,000 tons; Singaloet, 80,000,000 tons; Parambahan, 20,000,000 tons; Loerah Gedang, 4,000,000 tons; total, 197,000,000 tons; also an analysis of the coal.

According to information received by me on board the private steamers—viz, some of the Koninplijke Paketvaart and Rotterdamsche Lloyd boats—the engineers were all very well satisfied with the quality for the coasting trade as well as for the long trade.

It seems the German cruiser *Kaiser* in Java has made trials with this coal, which must also have proved satisfactory; and, had unforeseen conditions in China not made it necessary for this cruiser to leave for Chinese ports, the *Kaiser* would have arrived here to take a supply.

On board the steamers of the Dutch royal navy Ombiliën coals are used when obtainable, while the railways in Java and here are also large consumers.

Delivered in the bunkers, the coals cost 14 florins (\$5.63) per ton of 2,240 pounds, while the manager informed me that when taken in full shiploads, the price would range between 11 and 12 florins (\$4.42 and \$4.82) per ton, free on board, according to market value of other coals.

Emma Haven (harbor), about twenty minutes by rail from Padang, offers all facilities for coaling and for ships of 20 to 24 feet draft. There are splendid quays in the same style as in Tandjong Priok (Batavia).

* Filed for reference in the Bureau of Foreign Commerce, Department of State.

Fresh water of superior quality can be supplied to ships lying alongside the quays at 1 florin (40 cents) per ton.

The laborers are for the most part convicts, and, as these people are also used for war expeditions, production during the last few months has been rather low, on account of the difficulties in Atcheen (Pedir). These now having ended, sufficient labor is available, and the manager informs me that he expects for the next year a production of about 15,000 tons per month.

This coal is far superior to that of China or Japan, and, in fact, must come very close to the good quality of English coals.

Analysis of Ombiliën coals, by Edward Riley, Laboratory and Assay Offices, 2 City Road, London.

	Per cent.
Carbon.....	77. 62
Hydrogen	6. 08
Nitrogen	1. 11
Oxygen	12. 8
Sulphur .....	. 63
Ash	1. 76
Total.....	100

Mr. Riley adds:

The sample is a clean, fairly hard bituminous coal, in composition resembling our Derbyshire and Scotch coal. The percentage of ash is satisfactorily low, and its evaporative power is good.

This analysis was taken in 1892.

COAL IN GIBRALTAR.

The private sales of coal during the year 1898 amounted to about 306,000 tons, being about 25,000 tons over those of the previous year.

The number of steamers that coaled at this port during the same year was about 2,462, showing but a trifling decrease from that in 1897.

The increase in the quantity of coal sold is due to the great number of steamers that have gone to the United States, most of them in ballast, bunkering very heavily, and this accounts for the fact that while the increase in the quantity sold was about 25,000 tons during the year 1898, the number of steamers shows a small decrease as compared with 1897.

A recent attempt to establish a monopoly in the coal trade here failed.

The current price for the present year has been fixed at 24s. (\$5.81) per ton free alongside the hulk.

HORATIO J. SPRAGUE,

GIBRALTAR, January 7, 1899.

Consul.

Merchant shipping that entered the port of Gibraltar during the year 1898.

Nationality.	Steamers.	Sailing vessels.
	Number.	Number.
Argentine	2	
Austro-Hungarian	29	3
Belgian	14	
Brazilian	1	
British	2,602	51
Danish	46	13
Dutch	62	
French	155	4
German	189	3
Greek	11	1
Italian	19	14
Norwegian	160	45
Portuguese		11
Russian	19	7
Spanish	211	68
Swedish	31	6
Turkish	2	
Egyptian	1	
United States		
Total	3,554	226

Besides a large number of Spanish and Portuguese coasting lateen crafts.

SYRIAN SILK FOR THE UNITED STATES.

An article in the Arabic newspaper Lissan-ul-Hal, November 23, 1898, says that American silk manufacturers are beginning to realize the benefits that would arise from direct dealings with the Syrian silk producers. Figures collected by the Bureau of Statistics of the United States Treasury are quoted, showing the progress of silk manufacture in the United States within the last few years, and also imports and exports of raw and manufactured silks. It continues:

It is estimated that 85 per cent of the silk stuffs used in the United States are the products of their own factories, several hundred establishments. In 1860 American factories supplied about 15 per cent of the silk textiles consumed in the United States; in 1870, 30 per cent; in 1880, 55 per cent; in 1890, 70 per cent.

The success of American silk manufacturers in supplying the home demand and obtaining a foothold in the markets of the world is the more strongly marked, since other nations have failed in their efforts to compete with France. Even the latter country has barely held her stand, her exports of silk manufactures being, in 1896, \$52,862,700 and, in 1897, \$52,287,700.

It is only a question of time when the raw-silk product of Syria, which amounts to some 900,000 pounds annually, will be exported direct to the United States, instead of being sent to France to be refinished, rebranded, and reexported to America, as is the case with four-fifths of the Syrian silk harvest.

The establishment of direct communications between Syria and the United States in the silk business would decidedly benefit both the Syrian silk grower and

the American manufacturer. The Syrian reeling may not, however, conform to American looms; and, in the interest of both parties, especially of our countrymen who rear silkworms, it would certainly be wise to send a representative Syrian to the United States, in order that he might thoroughly study this question and report to our people what may interest them with reference to the American silk-manufacturing industry, technically as well as from a financial or commercial standpoint.

The above article is based upon figures, facts, and suggestions presented by me in a letter to His Excellency Naoum Pasha, governor-general of the province of Lebanon, who is deeply interested in this question of direct dealings with the United States in the silk business, and with whom I have on former occasions informally discussed the subject. Thousands of the Lebanon peasantry find profitable employment in the rearing of the silkworm. The cocoons are sold to the numerous silk factories established in the mountains for spinning and reeling purposes. Many of these are conducted by Frenchmen according to improved modern methods. There are reputable houses in Beirut engaged in silk culture, whose commercial integrity and responsibility are beyond question, and who have repeatedly assured me that they are ready to enter into direct commercial relations with the manufacturers of the United States. It is difficult, therefore, to understand why our silk manufacturers should continue paying commissions to Marseilles and Lyons houses, and also the additional expense resulting from circuitous transportation and numerous transshipments. One large silk house in New York, I am glad to note, has within the last week placed with an English commission merchant residing in Beirut an order for samples of Syrian raw silk. I am watching this venture with profound interest.

G. BIE RAVNDAL,
Consul.

BEIRUT, *December 1, 1898.*

UNITED STATES COTTON FABRICS IN SOUTH AMERICA.

In looking over the Venezuelan market, I find that very few cotton goods come from the United States. With the exception of a few cheap prints and heavy unbleached duck goods and sailcloths, no American goods can be found in the stores of this country. I inquired into the reason for this and found that very little effort is made by our manufacturers to introduce their products here, and I suppose that the same might be said of the greater part of South America.

Overproduction is the general cry of the cotton manufacturers at home, with the attendant shutting down of factories and the re-

duction of wages. Here we have a continent with over 150,000,000 people who, by reason of the climate, are the natural consumers of very large quantities of manufactured cottons of all kinds; and these goods are mainly bought from Germany, England, and France.

During my visit to the United States recently, I questioned a manufacturer as to why his goods were not represented in this market, and in answer was told that he would like very much to increase his business in this direction, but he was afraid of doing business with these countries on credit. He also said that his company had an agreement with a large jobbing house not to do any direct export business.

As to the first reason, I will say that there are houses in this business here and in other adjoining countries which are just as reliable as any United States house; and, as far as credit is concerned, very little business is done in the United States where the "dating ahead" of bills is not the rule rather than the exception. I firmly believe that business can be done here just as safely, if properly handled, as in the United States, and that certain grades of goods for which there is now no market at home can be sold here.

As to the jobber or middleman, I find that the wholesale merchant here is averse to dealing with him. He would rather buy direct from the manufacturer and thereby save commissions. The jobber does not care whose goods he sells, nor where they are sold, so long as he makes his profit; consequently, his efforts are directed toward selling them at home, where there is less expense and trouble in handling the goods, but only a small margin of profit for the manufacturer, which causes the overcrowding of the stores at home and a reduction of prices for lack of demand.

The time will come when manufacturers will see this more clearly, and efforts will be made to reach the vast army of consumers direct. The European thoroughly understands this, and consequently the bulk of trade is in his hands. England, France, and Germany virtually control the entire South American market.

Another reason why the manufacturer is slow in opening up this business is the difficulty in making up the assortments for this market. The American manufacturer assumes that this market demands that the quantities of a certain article are to be smaller and the variety larger; that, for instance, instead of putting up cases or bales of merchandise all of one pattern or design, this trade demands cases or bales assorted in different patterns or designs. All these details could be easily learned, providing the American manufacturer showed a little more of his boasted enterprise and energy. Why not open a foreign department in his factory and adapt it exclusively to the demands of the foreign market, sending representatives to these

countries to secure trade? By a judicious expenditure of labor and money, the result can not remain in doubt.

But in my opinion, the way of attaining the best results would be to open American business houses in the largest distributing centers of South America, which would handle American goods exclusively.

This would be impossible for any establishment to undertake alone, but consolidation of interests might accomplish it without too much individual risk.

The question of personnel is also an important factor. There is no use in sending men here who do not understand Spanish and can not accommodate themselves to the habits and customs of these people, preeminently different from our own. A man must first of all be a gentleman in every sense of the word. Polish goes a great way here. You can not do things in a rush, but persistence and hard work will tell. I have observed that many American drummers sent to these countries to sell goods are, on account of their behavior, a detriment to American business, some of them not knowing what it is to be sober after 8 o'clock in the morning; and, after staying a few months at a local hotel, they frequently leave without paying their board. The result is that good men suffer from their behavior. The English or German representatives are totally different, as a rule. The house which sends them here generally furnishes them with letters of credit, and such a thing as not paying for what they get is unknown. They are generally well-posted, educated gentlemen, and, comparatively speaking, far superior to the average drummer from our country. The latter do not compare at all favorably with our traveling salesmen at home.

I wish to emphasize the necessity of sending good men to represent American interests, and I know that we have many such, if only care is taken in their selection. If these suggestions were followed, the result would be surprising; for American goods can undoubtedly stand the highest competition and will sell alongside the best of European makes. They are in many cases admittedly superior and fully as cheap. Now is the time for the American manufacturer to introduce his goods into these markets, and, with the application of his usual common sense, he can beat the world in the sale of cotton fabrics and reap the benefits of an immense commerce, which is to-day sadly neglected.

Here are a few articles which, in my opinion, can be sold in this market: Prints, light and dark, ordinary width; prints, light and dark, wider; ginghams, staple, small checks; ginghams, larger checks; cretonnes and chintz, lining cambrics and silesia, bleached and unbleached cottons, cottonades for suitings, denims and tickings, cotton blankets, white and colored cotton bedspreads, checked and

striped nainsooks, printed lawns and challies, cotton toweling by the yard, cotton towels by the piece, mosquito netting, and many other similar items.

Packing is a factor to be considered, as, by the customs laws here, everything pays duty according to weight; therefore, everything in excess of what is absolutely necessary, such as cardboard or boards on which goods are folded or rolled, should be omitted. Heavy packing cases pay the full amount of the specified duty on the contents. Another thing to be considered is that packages must only contain merchandise of one particular kind, since if there are many kinds, the whole must pay duty as of the higher class, of which there may only be a small quantity.

LOUIS GOLDSCHMIDT,

LA GUAYRA, *November 25, 1898.*

Consul.

MARKET FOR TEXTILES IN PERU.

German textile journals are telling the cloth makers of the Empire to take their wares to South America, particularly to places hitherto unvisited. Among these is Iquitos, capital of the province of Loveto in Peru. Situated near the headwaters of the Amazon, South America's largest river, having relations with regions watered by its tributaries, the Ucayali, Napo, Yavary, Rio Tigre, Jacua, etc., easily approached, inhabited by as energetic and enterprising a population as one will find in the lands south of the Equator, it has all the conditions necessary to make it a great trade center. On the Pacific, a few mills make buckskins, cheviots, blankets, etc., but because of the enormous cost for freightage over the Andes, sales are local. Mules have to carry goods over the comb of the Cordilleras, and this cost cuts off all possibility of competition with countries as well equipped as are England and Germany; this, in spite of steamship freight rates, which run \$30 per cubic meter (35.547 cubic feet), and import duties based on a desire to obtain revenues as well as to protect home industries.

Up to the present, the demand for German goods has been confined to manufactured articles. Among these are moleskins, in good and middle grades, in whole "cuts" or pieces of $2\frac{1}{2}$ yards; woolen and cotton blankets (England competes in this line); cotton and silk laces, and summer worsteds in cheap and middle grades; in the last, a large business has been built up. Cotton hose, black and in colors, have sold well. Cotton prints, patterns that went ten years ago from Manchester, still find favor. Germans are unable to assign a good reason for this. My own impression is that it is due to the

excellent qualities of the goods. The trade is not confined to bright colors; many of Alsace's soft, quiet patterns are in demand. England sends large quantities of nettings (mosquito), tulles, gauzes and mulls, white cotton shirtings, napkins, towels, linen and cotton handkerchiefs, white drills, gray domestics, gray linen drills, hessians, and sailcloths. Large quantities of colored cottons for shirts, as well as ready-made shirts, are going in. Colored pajamas and various kinds of underwear are imported from England and Germany, in about equal quantities. Switzerland sends hammocks (it is a good plan to weave in the Peruvian or Brazilian coat of arms), cords for hammocks, handkerchiefs (especially colored lines, fantastically embroidered imitations of silk handkerchiefs, which are great favorites with the natives in their national dance). The United States sends cotton goods, especially blue drills. France sends corsets, shawls, silk ribbons, cloths, caps, sunshades, etc. There is a good business in hats and ready-made suits, that will wash, for any firm that goes to work in the right way to win the market of Iquitos.

White drill pantaloons are sent from the United States, England, France, and Germany. Much of the trade in this section is done by Hamburg and London houses.

If anyone will work the field, taking care to send catalogues in Spanish and Portuguese, rather than in English, there is no doubt that a fairly profitable business can be built up. Small shipments of samples, with a guaranty that goods will go in equal to or better than samples, is an excellent way to win favor in those countries. At present, goods go in every five or six weeks, via the Booth-Iquitos Line, whose boats leave Liverpool, Hamburg, Havre, and Lisbon. Rates should be made "free on board" at one of these ports.

It is in such markets—in fact, in the fields sought by the merchants and manufacturers of this Empire—that the United States should win its greatest success. Here, we have to contend with conservatism and prejudice. In South America, in the East, in Africa and Australia, we meet Germany's manufacturers and merchants in markets as open and favorable to our efforts and enterprise as to theirs. It is in such markets that we must seek those openings for our exports made necessary by our rapidly increasing power to produce.

J. C. MONAGHAN,

CHEMNITZ, *January 16, 1899.*

Consul.

BEER IN COLOMBIA.

Consul Shaw, of Barranquilla, writes as follows to a Western brewing company, under date of December 16, 1898, answering questions propounded by them:*

During the year ended June 30, 1898, the beer imported from the countries named below was as follows:

From—	Packages.	Weight.	
		<i>Kilograms.</i>	<i>Pounds.</i>
England.....	5,565	383,257	844,928
France	1,389	110,348	463,633
Germany	9,218	568,608	1,253,751
United States.....	2,636	165,284	363,385
Total.....	18,808	1,227,497	2,925,697

Almost all beer is imported in pint and quart bottles, which are packed either in cases or in barrels. The larger proportion is put up in pints. The duty is 5 centavos (about 1.9 cents) per kilogram, plus 20 per cent. It is assessed on the gross weight of the package.

European houses give six, nine, and twelve months' credit. American houses allow three and four months.

The prices asked for some of the brands of bottled beer in this city are as follows:

Description.	Price.	
English:	<i>Pesos.</i>	
Tennent's "Gallo Negro." in pints.....per case of 5 dozen...	20.00	\$6.20
Tennent's "Gallo Negro".....per bottle.....	.40	.12
Tennent's "Gallo Negro".....per dozen.....	4.40	1.36
German:		
"Leona" brand, in pints.....per case of 4 dozen...	24.00	7.44
"Leona" brand, in quarts.....per case of 3 dozen...	28.00	8.68
Pabst Milwaukee.....per case of 5 dozen pints...	19.00	5.89

"Leona" brand in pints is retailed at 60 centavos (18½ cents) per bottle. "Leona" brand in quarts is retailed at 1 peso Colombian currency (31 cents).

Pabst Milwaukee is sold at 19 pesos (\$5.89) per case of 5 dozen pints.

Imports to Barranquilla from the United States are brought almost exclusively by the Atlas Line of mail steamers from New York. It is an English company. The New York agents are Messrs. Pim, Forwood & Kellock, No. 24 State street, New York City. This is the only direct line from the United States to this port.

* Advance Sheets have been sent to the inquirers.

Almost every house in Barranquilla handles beer. The following firms are general importers, carrying lines of beers, wines, and liquors: O. Beme & Co., Flohr Price & Co., Giesecken, Ringe & Co., J. Castellano & Co., José Augustin Glen, Santander Marquez M., and R. E. Iguarau. Consular officers are not permitted to report the financial standing of any house.

There are no breweries in this consular district, but beer is now made at Bogotá, and it is said to be of a very fair quality.

I am told by dealers that English beer is most popular in this market, although, as will appear from the data given, Germany furnished the largest amount last year. American beer formerly ranked among the most popular brands, but I am told it has lost favor with bottle dealers and consumers because it will not keep in this climate as do the English and German beers. I saw to-day in the warehouse of an importer, American beer which I was told had been in the house about four months. It was unsalable, because it had become cloudy and dirty looking; there was also considerable sediment in the bottle. It is said that this difficulty is encountered with most, if not all, of the American beers after a time, while the English and German brands are comparatively free from it. I saw English beer which the same dealer said had been in his house for seven months. It was quite clear and contained no sediment.

Beer is not kept in cold storage. The average normal temperature is 86° in the shade. I have seen it as low as 72° during the last thirteen months. One factory supplies this city with ice at 7½ centavos (equal to 2.32 cents) per pound at the factory. In large quantities, the price is somewhat less. Very many people buy ice in as small quantities as 1 pound at a time.

In reference to the method of packing beer for export to this country, I call attention to the following points:

Barranquilla, a city with an estimated population of 40,000, is also the port of entry for a large portion of the imports of Colombia, and is therefore a distributing point from which the interior is supplied. The Magdalena and Cauca rivers are the great highways on which the merchandise is carried to and from the interior. Upon leaving the river, resort must be had to the great "common carrier" of Colombia—the pack mule. The load for one mule is 250 pounds, and, in order that the weight may be properly adjusted on the animal, it should be capable of an equal division into two packages of 125 pounds each. The mules on some of the routes carry a somewhat heavier load, and sometimes take two packages of 150 pounds each; but, as a rule, 250 pounds is the proper load. You will therefore readily see that beer packed in large barrels is not suitable for the interior trade. It would require repacking here, which would so add to its cost as to practically exclude it. As the duties are

assessed upon the gross weight of the package, the cases should be as light as it is possible to make them, consistent with proper strength. I have myself measured the cases in which the English beer "Gallo Negro" is packed. They are 27 inches long, $12\frac{3}{4}$ inches high, and 16 inches wide. The package is secured by two narrow bands of hoop iron. They weigh, filled, 58 kilograms (128 pounds). The American cases I have measured are 32 inches long, 15 inches wide, and 15 inches deep. The package weighs about the same as the English and is secured with iron bands in the same manner. Both of the above sizes seem to give satisfaction.

HINDRANCES TO EXPORT TRADE WITH BRAZIL.

I regard it my duty to again call attention to a serious obstacle in the healthy development of our trade with Brazil, viz, the conditions created by the combination of the foreign transportation companies, whose steamers are plying to and from the ports of Brazil.

These companies are: Lamport & Holt, Liverpool; Prince Line, Newcastle; Norton Line, Liverpool; Sloman Line, Hamburg; Chargeurs Réunis, Havre.

These lines, which constitute a trust, had in August last reduced the freight rates on coffee (almost the only return cargo of the steamers plying between the United States or Europe and Rio de Janeiro and Santos) to 10 cents per bag, in order to drive out of Brazilian waters the trans-Atlantic steamers whose owners did not enter into the above-mentioned agreement. About six weeks afterwards, when the "tramp" steamers (so called by the trust) were hunted down and the refractory coffee shippers brought to terms, freight rates were increased again to 30 cents a bag, which rate is charged at present. One of the results of this practice is that there is not enough freight room available at present for the export trade of the United States with Brazil, and those who want to import merchandise into Brazil before the date on which the increased tariff goes into effect (January 1, 1899) are frustrated to a very large extent.

Another serious obstacle to our competition in Brazil with European exporters is the fact—complained of by Rio de Janeiro and São Paulo importers of American goods and probably traceable to the same combination of non-American shipowners—that freight rates to Brazil are (unnecessarily) higher from the United States than from the European ports. A Rio de Janeiro commission merchant told me not long ago that he made an additional profit on flour bought in New York by shipping it via Hamburg; and the head of a well-known São Paulo house of importers and manufacturers of agricultural and coffee machinery told me last week that in buying a

large quantity of pig and cast iron, he could not avail himself of the lower prices offered by American houses as against European competition, on account of the higher freight rates from New York. From the manifest, I saw that a cargo of flour recently arrived here from New York paid 85 cents per barrèl, while the scheduled steamer freight of flour from Hamburg to Rio de Janeiro or Santos is 30 marks (\$7.14) per ton (of 11 barrels).

In this connection, I may say that the published freight tariffs of the different steamer lines can hardly be taken in evidence in regard to the freight actually charged against different shippers, as the representative of one of the members of the steamer trust has assured me, stating that trans-Atlantic freight rates are, in all cases of importance, the subject of specific agreements.

The above described are among those conditions which ought to be taken into consideration by those who try to understand why the United States is not having its fair share of the import trade of Brazil.

EUGENE SEEGER,
Consul-General.

RIO DE JANEIRO, *December 24, 1898.*

PUMPS IN MEXICO.

Consul Kindrick, of Ciudad Juarez, in answer to an inquiry of a New York firm,* writes, under date of January 10, 1899:

There is no article of common use so much required in the northern section of this Republic as the ordinary hand pump. The soil is arid and dry and free from surface springs and small streams. There is not sufficient annual rainfall to keep cisterns filled with drinking water, and almost the only source of fresh-water supply consists of wells sunk in the earth. The water is secured by hand pumps and windmills. They are necessary at every Mexican home, at all the mining camps, and on the cattle ranges. At the camps and on the ranges, windmills are used, and they are invariably of United States manufacture.

There is a growing demand for windmills and hand pumps of the latest and most approved pattern. A windmill or pump is as essential to a home in northern Mexico as a cooking stove. In consideration of the fact that pumps are such an important factor in the economy of domestic establishments, the Mexican Government admits them free of duty.

For the fiscal year ended June 30, 1898, there was imported at the custom-house in this city \$57,200 worth of pumps. Of course, they were not all used in this immediate vicinity, but were dis-

* Advance Sheets of report have been sent to the firm.

tributed through the country by the railroads which touch the border between the United States and Mexico at this place. It is safe to assert, however, that most of the pumps imported were used in the northern section of the Republic, because they are more necessary in this locality. The Mexican Central Railroad and the Rio Grande, Sierra Madre and Pacific Railroad are the distributing agents from this point.

The best way to introduce an article of manufacture in Mexico is to dispatch a capable and qualified commercial traveler who understands the language of his customer and the methods of the country. But whether or not it would pay to do this in the matter of enlarging the demand for pumps, I am not prepared to state.

Messrs. Ketelsen & Degetau, of this city, are general merchants who handle a great deal of American machinery and distribute it throughout the Republic. They are the principal agents through whom various articles of United States manufacture find a market in this part of Mexico.

CHANGES IN MEXICAN TARIFF.*

Ambassador Clayton sends from Mexico, January 18, 1899, copy of a decree of December 30, making certain changes in the Mexican tariff, as follows:

[From the Mexican Herald.]

The President of the Republic has issued the following decree: The present customs tariff is hereby modified and amplified in the following terms:

Tariff section.	Description.	Present rate.	New rate.	
		Mexican.	Mexican.	U. S.
30	Horses, mares, and any other animals of those specified, of pure breed, for breeding purposes.....	Free.	Free.	.....
	NOTE.—Horses and mares for breeding purposes are free as it is; the innovation is that all blooded stock for breeding purposes, viz swine, neat stock, goats, sheep, and asses, are to be free also.			
31	Beaver hair.....per legal kilo...	\$3.00	\$2.50	†\$1.19
32	Hair of the vicugna, rabbit, hare muskrat, and the like, per legal kilo	1.75	1.50	.715
34	Beaver skins, with the hair on, and untanned...per gross kilo...	.01	.30	.143
34a	Skins of the vicugna, rabbit, hare, muskrat and the like, with the hair on, and untanned.....per gross kilo .....	.01	.20	.095

*The terms "net kilo.," "legal kilo.," and "gross kilo.," used in the Mexican tariff, are thus explained: "Net weight" is the intrinsic weight of the merchandise without the casings, packages, or wrappings; "legal weight" is the weight of the goods, including the interior casings, wrappings, boxes of cardboard, wood, or tin in which they may be packed inside the exterior box, which serves as the outside receptacle; "gross weight" is the weight of the merchandise with all the wrappings, interior and exterior without any allowance for packing filling, or hoops.

†The reductions to United States currency have been made according to the valuation of the United States Director of the Mint, January 1, 1899—\$1 Mexican=47.7 cents.

Tariff section.	Description.	Present rate.	New rate.	
		Mexican.	Mexican.	U. S.
34b	Unspecified skins, untanned.....per gross kilo...	\$0.01	\$0.03	\$0.014
68	Leather manufactures, unspecified.....per legal kilo...	.75	1.50	.715
72	Calfskins, patent leather, kid, chamois and other common skins, tanned.....per legal kilo...	1.50	1.30	.62
78	Manufactured articles of tanned skins, with smooth hair, per legal kilo.....	2.00	4.00	1.90
78a	Tanned skins with fine hair.....per legal kilo...	2.00	2.00	.954
	NOTE.—in this article a classification has been introduced.			
79	Leather bands for hats.....per legal kilo...	.75	1.50	.715
94	Cut pieces for leather slippers of all kinds.....do.....	.75	1.50	.715
95	Cut pieces for leather boots and shoes.....do.....	3.00	1.50	.715
173	Feculæ, unspecified, including those of a lacteous character or those prepared under any kind of formula.....per legal kilo...	.10	.10	.047
	NOTE.—A slight change in wording.			
206a	Ordinary wood, sawed into thin sheets or layers.....per gross kilo...	.02	.01	.0047
207	Manufactured articles of common wood, roughly wrought, not specified.....per legal kilo...	.40		
	Do.....per gross kilo.....		.05	.023
208	Manufactured articles of common wood, not specified, which are not roughly wrought, and are without inlaid work or ornamentation of metal, when the weight of each article exceeds 1 kilogram.....per legal kilo...	.40	.15	.071
209	Manufactured articles of fine wood, as of common wood covered with thin layers of fine wood, not specified, without in- laid work or ornamentation of metal, when the weight of each article exceeds 1 kilogram.....per legal kilo...	.40	.30	.143
210	Manufactured articles of all kinds of woods, not specified, with inlaid work of any substance other than gold, silver or platinum, or with ornaments of bronze or any other ordi- nary metal.....per legal kilo...	.40	.60	.286
211	Manufactured articles of all kinds of woods, not specified, per legal kilo.....	.40	.40	.19
	NOTE.—Nos. 207-210 are new classifications; 211 (new) practi- cally coincides with the present 207.			
212	Barrels, casks, kegs of wood, set up or knocked down from 15 to 300 liters in capacity.....	Free.	Free.	
	NOTE.—Change of wording.			
213	Cases of common wood, roughly made, for outside packing, set up or knocked down.....	Free.	Free.	
	NOTE.—Practically the same as the present 209.			
213a	Spools of ordinary wood for winding thread.....per legal kilo...	.40		
	Do.....per gross kilo.....		.02	.0095
214	Vats, pails, and tubs of wood; wooden barrels of less than 15 liters capacity, and wooden bath tubs.....per gross kilo...		.10	.047
	NOTE.—New wording. The duty on vats and pails is un- changed. Barrels, irrespective of capacity, are at present under No. 208 and are free.			
216	Poles, cross-arms, and spikes of wood for stringing electrical wires.....	Free.	Free.	
	NOTE.—New wording. At present the section reads "for telegraph and telephone lines," which rigidly interpreted, would exclude the poles, etc., for electric railroads, from the benefit of free importation.			
218	Wooden tanks or receptacles, not specified and all kinds of wooden barrels, not specified.....per gross kilo...		.05	.023
	NOTE.—The wooden tanks at present come under No. 215, \$0.06 per gross kilo and the barrels under No. 208, free.			
228	Manufactured articles of straw, wickerwork, osier or rattan, not specified.....per legal kilo...	.40	.40	.19
	NOTE.—A fuller wording.			

Tariff section.	Description.	Present rate.	New rate.		
229	Manufactured articles of straw, wickerwork, osier or rattan, with upholstering of silk or containing silk or of skins, even though they have adornments other than gold, silver or platinum, not specified.....per legal kilo...	<i>Mexican.</i> \$.60	<i>Mexican.</i> \$.60	<i>U. S.</i> \$.286	
	NOTE.—Fuller wording.				
235	Brooms or whisks, of beath or millet, of all classes and sizes and brushes mounted with common wood, when the weight of each exceeds 1 kilogram.....per legal kilo.....		.20	.095	
	NOTE.—The duty on brooms and whisks remains unchanged. The duty on brushes is at present under No. 207 \$.40 per legal kilo.				
247	Furniture of common wood, coarsely finished..per legal kilo...	.08			
	Do.....per gross kilo.....		.08	.038	
	NOTE.—Change of wording.				
248	Furniture, other than that for sitting purposes, of common wood, not coarsely finished, without inlaid work or ornaments of metal, even though adorned with material other than silk or mixture of silk.....per legal kilo.....	.20	.15	.071	
249	Furniture for sitting purposes, of common wood, not roughly finished, without cushioned seats or backs and without inlaid work or ornaments of metal, even though they be adorned with leather or any material other than silk or a mixture of silk.....per legal kilo.....	.20	.20	.095	
	NOTE.—Change of wording.				
249a	Furniture for sitting purposes, of common wood, with cushioned seats and backs and without inlaid work, metal adornments or upholstering of silk or a mixture of silk, per legal kilo.....	.20	.25	.119	
250	Furniture of fine wood or of common wood, with facing of fine wood, without adornments of metal, without inlaid work or cushioned seats and backs, even though adorned with leather, material other than silk or a mixture of silk, or mirrors not measuring more than 75 centimeters in their greatest dimension.....per legal kilo.....	.30	.30	.143	
	NOTE.—Change of wording.				
251	Furniture of fine wood or of common wood with fine wood facings, with cushioned backs and seats, and without inlaid work or ornaments of metal nor upholstery of silk or mixture of silk.....per legal kilo.....	.30	.40	.19	
252	Furniture of wood of all classes, with inlaid work of any material other than gold, silver, or platinum, or with adornments of bronze or any other ordinary metal and furniture adorned with silk or a mixture of silk.....per legal kilo.....		.60	.286	
	NOTE.—Furniture with silk upholstering now pays \$.35 per legal kilo, and furniture with inlaid work of any material other than gold, silver, platinum, etc., now pays \$.40 per legal kilo.				
444	Cotton cord, not exceeding 10 millimeters in diameter, per legal kilo.....	1.50	1.20	.572	
447	Cotton thread in balls or skeins, including crochet thread, and thread for rebosos, even though the center of the balls, is a wooden spool.....per legal kilo.....		1.20	.572	
	NOTE.—Crochet thread in spools now pays \$2 per 100 spools of 275 meters.				
473	Interior or exterior shirts of cotton cloth for men and children, although said shirts include slight trimmings of wool or silk.....per legal kilo.....	1.30	1.50	.715	
499	Yarn of linen, hemp and other like fibers, <i>not specified</i> , per legal kilo.....	.10	.10	.047	
	NOTE.—The underlined words indicate the only innovation in this section.				

Tariff section.	Description.	Present rate.	New rate.	
499a	Yarn of henequen, ixtle, New Zealand fiber (<i>Phormium tenax</i>), sunn hemp (<i>Crotalaria juncea</i>) or a mixture of said substances, not exceeding 403 meters in length for each kilogram in weight; and yarn of abaca or manila hemp not exceeding 437 meters for each kilogram in weight, per legal kilo.....	Mexican. \$0.10	Mexican. Free.	U. S.
569	Interior and exterior shirts and drawers of wool, although they may have slight trimmings of silk.....per legal kilo...	2.00	\$2.50	\$1.19
575	Curtains of wool ready for use or with lining of cotton, wool or linen, even though they have embroidery, adornments or accessories of any material other than fine metal or silk, per legal kilo.....		2.75	1.31
738	Vinegar in wooden vessels.....per net kilo...	.06		
	Do.....per gross kilo...		.05	.023
	NOTE.—The present rate is without allowance for loss or breakage.			
767	Manufactured articles, not specified, of paper or pasteboard, per legal kilo.....	.25	.40	.19
767a	Manufactured articles, not otherwise specified, formed of smooth or corrugated sheets of ordinary board, of crude pulp, without lining or adornment of any kind.....per legal kilo...	.25	.06	.028
767b	Manufactured articles, not otherwise specified, of paper of white, crude or dyed pulp, in open patterns or cut in strips or in any other form, without being printed, engraved or lithographed.....per legal kilo...	.25	.25	.119
768	Manufactured articles, not specified, of paper or pasteboard, adorned with silk or materials containing silk, or with skins, even though they may have adornments other than gold, silver or platinum.....per legal kilo...	.60	.60	.286
	NOTE.—Change of wording.			
783	Fancy cards with pictures or engravings, or adornments of cloth, ribbons or flowers.....per legal kilo...	.25	.40	.19
783a	Cards, not otherwise specified.....do.....	.25	.25	.119
838	Tricycles without rubber tires, for children.....per gross kilo...	.20		
	Do.....per net kilo.....		.25	.119
838a	Velocipedes (bicycles, tricycles, etc.) of all classes, not otherwise specified, and their loose parts or repair pieces.....per gross kilo...	.20		
	Do.....per net kilo.....		1.00	.477

Accompanying these modifications are a number of explanatory notes, the purpose of which is to fix more exactly the character of the merchandise coming under the several classifications.

The note in regard to the importation of all kinds of fine stock for breeding purposes is of interest to Americans, in view of the fact that the new tariff on the subject may give rise to a very considerable trade in the bringing in of pedigreed animals. The note in question is as follows:

"The free importation of thoroughbred animals, included in this section and intended for breeding purposes, may be granted, when they come with their pedigree or certificate showing the purity of their breed; but the opinion of the department of encouragement shall previously be heard with respect to the standing of the breed of which specimens are to be imported, the authenticity of the pedigree, and the reliance to be placed in the persons signing the same. In view of these particulars and others that the department of finance may consider fit to gather on the same points, and for the purpose of ascertaining the use which is to be made of the animals whose free importation is desired, the privilege of free impor-

tation may be granted; but the number of animals to which the privilege applies shall be specified and a bond of the amount necessary shall be exacted, which shall be forfeited in case the animals are applied to any other use than that which is declared, or in case the pedigree, even after being accepted, should turn out to be false, without detriment to the application in such cases of the penalties provided by the customs regulations for smuggling."

TRANSIENT.

This decree will go into force on the 1st of March and shall be applicable to merchandise imported in ships arriving at a Mexican port after midnight on February 28 and to merchandise crossing the border through a custom-house on the same date and after the same hour, with the exception of the articles covered by section 499a, which may be imported duty free on and after January 1, 1899.

Done in the palace of the Federal Executive in Mexico on December 30, 1898.

PORFIRIO DIAZ.

Consul-General Barlow, of Mexico City, sends a report under date of January 26, 1899, covering the same information.

ORANGES AND ORANGE SHOOKS IN MEXICO.

In reply to a New England correspondent,* Consul Kindrick, of Ciudad Juarez, under date of January 5, 1899, writes:

There are no firms in this city dealing in shooks for oranges. The business for this place is handled by G. E. Hubbard & Co. and the Goodman Produce Company, of El Paso, Tex., which is situated across the Rio Grande River, just opposite this city.

Nearly all orange-box shooks come from Florida. It would be difficult to determine precisely their exact cost. To say they cost 10 cents per box would be as accurate a value as could be given. The shipments of oranges this season from Mexico to the United States have been greater than ever before. Three hundred and four carloads of oranges have passed through this port for distribution throughout the United States. Ten years ago, a dozen cars were considered a great many.

The season for shipping oranges begins in August and September, but the fruit in the beginning is poor in quality. This early crop is called "Brevas," and only thirteen carloads were shipped to the United States markets this season. The Mexican oranges shipped through this port are from La Barca, in the State of Jalisco, which borders on the Pacific Ocean in the southwestern section of the Republic. They are marketed in the central States of the Union and as far south as Atlanta, Ga. Five carloads were sent to Canada in bond.

* To whom this issue of Advance Sheets has been sent.

LEASE OF COAL MINES IN VENEZUELA.

Minister Loomis transmits from Caracas, under date of January 14, 1899, copy and translation of a contract between the Government of Venezuela and the Italian firm of Lanzoni, Martini & Co., of Rome, providing for the working of the Guanta coal mines, near one of the best harbors of Venezuela. The coal from this mine, adds Mr. Loomis, was recently tested by an Italian man-of-war, and, if the coal possesses good gas or steam making qualities, the output will seriously affect the consumption of American and English coal, which at present are exclusively used in Venezuela. The contract reads:

[Translation.]

With the authorization of the President of the Republic and the Government council, the following contract has been signed by the Minister of Public Works and Antonio Lanzoni, an Italian member of the firm of Lanzoni, Martini & Co., of Rome:

ARTICLE 1. The Government of Venezuela rents to Lanzoni, Martini & Co., for a period of fifteen years from the date of the approval of this contract by Congress, the Guanta Railway and the coal mines known as "Naricual, Capiricual, and Tocaropo," situated in the Bolivar district of the State of Bermudez. There are included in this rental the wharf for loading coal, storage buildings, shops, railway lines with all their rolling stock, and all rights which the Government has in the property.

ART. 2. Lanzoni, Martini & Co. bind themselves to pay to the Government an annual rental of 104,000 bolivars* in cash, in monthly installments of 8,666.66 bolivars. The company also binds itself to pay to the Government one-half a bolivar for every ton of coal taken out, this sum to be used in paying the claims of those who can legally prove that they have any rights in the aforementioned mines.

ART. 3. The payments mentioned in the foregoing articles are to be made as soon as the mines are declared to be in working order.

ART. 4. Lanzoni, Martini & Co. bind themselves not to charge the Government more than 25 bolivars (\$4.825) per ton for coal consumed by its war ships, or for coal used in Government enterprises.

ART. 5. Passenger and freight rates and wharfage charges shall be the same as the present rates and can not be increased in any case; the Government binding itself during the existence of this contract to keep closed the port called "El Rincon" or "Guzman Blanco," except for articles such as earthenware clay, wood, fish, vegetables, and other articles of this nature.

ART. 6. The National Government and the State of Bermudez shall be conceded a reduction of 50 per cent in passenger and freight rates for their employees and articles for the use of the Government, and the mails shall be carried free.

ART. 7. Lanzoni, Martini & Co. bind themselves to make at their own expense all improvements and repairs for developing and working these mines on a large scale, and also to improve and perfect the railway lines and their rolling stock. All these works must be commenced within four months after the approval by Congress of this contract, and must be concluded within eight months from that date,

*1 bolivar=19.3 cents.

with an extension of four months if unforeseen and uncontrollable circumstances can be proven.

ART. 8. Lanzoni, Martini & Co. shall be exempted from the payment of duties on all the machinery and tools necessary for exploring and working the mines, and for making the improvements and repairs on the railways, wharf, and buildings.

ART. 9. As a guaranty for the faithful performance of this contract, Lanzoni, Martini & Co. shall deposit in cash in the Bank of Caracas, ninety days after the approval of this contract by Congress, the sum of 50,000 bolivars (\$9,950); and this sum can not be withdrawn until the installation is complete and the requirements of article 7 carried out. If this contract is not executed through any fault of Lanzoni, Martini & Co., the Government shall be at liberty to dispose of the 50,000 bolivars as they may see fit, after the competent tribunal has passed on the matter.

ART. 10. Should the work at the mines and on the railways be suspended for no just cause for six consecutive months, Lanzoni, Martini & Co. shall pay to the Government the sum of 20,000 bolivars (\$3,960) in cash, and if the works continue suspended for six more consecutive months, the present contract shall be null and void and the mines, with all improvements and repairs, shall become the property of the Government, and Lanzoni, Martini & Co. shall have no claim for indemnity.

ART. 11. Lanzoni, Martini & Co. bind themselves to employ at their works native, in preference to foreign, labor.

ART. 12. When the fifteen years of this contract expire and all its conditions shall have been fulfilled, the Government binds itself to extend it for ten years more; and at the end of this second extension, mines, railways, buildings, improvements, etc., shall be inventoried and become the property of the Government. If after the expiration of the first fifteen years, Lanzoni, Martini & Co. do not care to avail themselves of an extension, everything shall likewise revert to the Government.

ART. 13. Even in time of war, all employees of Lanzoni, Martini & Co. shall be exempt from military service, and the Government shall impose no national taxes and shall ask the State of Bermudez to impose no State taxes.

ART. 14. At the end of the periods of time referred to in article 12, the Government binds itself to give preference, other things being equal, to Lanzoni, Martini & Co., or their representatives, in celebrating a new contract.

BICYCLES IN GUADELOUPE.

Consul Aymé, of Guadeloupe, on January 25, 1899, writes:

A possible opening presents itself in this city for the sale of American bicycles. There is now under construction in the principal public square a bicycle track, at the city's expense.

The duty on French bicycles is 25 francs paper, or about \$3.80, each; on American bicycles, 50 francs paper, or about \$7.60. The freight on a bicycle from Paris here amounts to about 65 francs gold, or \$12.40, while from New York the freight is from \$1 to \$2 each; thus leaving a good margin for the American machine.

The French machines are of a grade that permits them to be re-tailed for a cash price of 350 to 400 francs paper, or from \$53 to \$60; but the usual mode is to sell them on monthly installments of 10

francs, or \$1.50, charging from 450 to 500 francs in such case, or from \$68 to \$75.

I believe that sales of a medium-priced wheel could be made here. Bicycles should be light, strong, showy, and of good workmanship. Probably, the best way to introduce them would be to send a certain number of wheels, packed six in a crate, in light crates, to some reputable merchant, allowing him to sell them on installments of, say, \$3 a month.

I think it very likely that a sort of bicycle craze will spring up here, and I would like to see our machines in the field.

RUBBER IN GUATEMALA.

I send herewith two important Government decrees, with translations, concerning the cultivation of rubber in this Republic.

In my annual report to the Department,* I called attention to the importance of this industry, of the efforts of the Government to foster it, and of the vast amount of available land in Guatemala especially suitable for the growth of the rubber tree. In the coast regions, the forests abound in wild rubber trees, but the great difficulty experienced by the owners has been to protect their property from theft. Not only has the rubber been stolen, but the destructive methods used in extracting it have destroyed vast numbers of the trees. Under the decree now formulated, no one can extract or sell rubber without being empowered to do so by license from the Government, and suitable penalties are imposed for breach of the law.

In addition to this, the Government offers a premium or bounty to the owners amounting to 1 caballeria (112 acres) of land for every twenty thousand rubber trees four years old which shall have been planted after the date of this decree.

A. M. BEAUPRÉ,
Consul-General.

GUATEMALA, *January 21, 1899.*

DECREE OF JANUARY 13.

The Constitutional President of the Republic, in use of his powers, resolves:

- (1) Rubber can not be extracted from any land, be it private, municipal, or unappropriated, without the corresponding license extended by the "alcalde" having jurisdiction over said land.
- (2) To grant this license to proprietors of land, the exhibition of their titles or recent certificate of the register of record office will be sufficient.
- (3) If the land be national, in order to issue the license, it will be necessary to show the rent contract authorized by the Executive and fulfill the stipulated conditions.

* To appear in *Commercial Relations*, 1897-98.

(4) In all other cases, the land being unappropriated, the license can not be granted, without the payment in advance of the amount which the Department of Interior shall fix, the receipts from which shall be exclusively destined to provide the primary schools with their needed supplies.

(5) The municipal secretaries shall keep a book in which shall be shown a record of the licenses granted by the alcaldes. In both book and license shall be stated the name of the person to whom the license has been extended, the number of quintals of rubber to be extracted, the place where the extraction is to be verified, and the authority under which the work is done.

(6) Whenever the interested parties ask for it, there shall be extended them a special license for each quintal of rubber.

(7) The administrators of maritime or frontier custom-houses shall not permit the exportation of rubber, without requiring the delivery of the corresponding license, stating the number of quintals it is desired to export.

(8) All unmanufactured rubber moved without corresponding license, will be considered as extracted from another person's property, and shall be confiscated and an account rendered to the judge of the department, together with the name of the person moving the rubber, in order that, if it can not be proved that the rubber was taken from his own lands or as a legal renter, there shall be imposed a penalty in conformity with article 395, penal laws.

(9) Rubber confiscated according to the previous article, after the crime has been proved by the judge, shall be sold by the municipalities at public auction and the product disposed of, one-half in conformity with article 4 and the other half given the denouncer.

(10) The municipal secretaries, in the cases of articles 2 and 3, shall collect 12½ cents for each license issued.

DECREE OF JANUARY 14.

The Constitutional President of the Republic resolves:

(1) For every 20,000 rubber trees four years old which shall be shown in perfect condition and which shall have been planted after the date of this resolution, there shall be granted to the owner, as a premium, 1 "caballeria" (112 acres) of the public lands of the nation; and

(2) In order to grant this favor, the governor of the respective department shall name two experts, who will give information relating to the area under cultivation, the number of trees, and their age.

MUNICIPAL TAXES IN MARTINIQUE.

I forward herewith translation of a decree which appeared recently in the *Moniteur Officiel*, bearing on the "octroi de mer," or "municipal tax," to be levied on the products and articles gathered, prepared, or manufactured in the colony, and which are indicated in the said tariff adjunct to the decree of August 27, 1898, a synopsis of which was given by Consul Darté in his report of October 4, 1898.*

The decree reads as follows:

ARTICLE 1. Anyone who gathers, prepares, or manufactures in the colony goods or articles incorporated in the tariff of "octroi de mer," or "municipal tax"—articles

*See CONSULAR REPORTS No. 220 (January, 1899), p. 51.

from France or foreign countries—is bound to make a declaration of same to the internal revenue department.

ART. 2. A numbered and signed registered book is given gratuitously to each of the above-specified persons, who are obliged to keep daily accounts of—

- (1) The total crop.
- (2) The quantities turned over for consumption.
- (3) The quantities remaining in his possession.

ART. 3. The register must be shown at any time when demanded by the agent of the internal-revenue department, who assures himself of the truth of the statements.

ART. 4. At the end of each month, or sooner if necessary, the register is signed by an agent of the internal-revenue department, who specifies thereon the duty to be paid and hands over an order for payment to the treasury, which payment must be effected within the next twenty-four hours.

ART. 5. Those failing to comply with the present decree will be reported by the agents of the internal-revenue department, and fines will be applied according to the penalties mentioned in the resolutions passed by the council general in its session of December 24, 1897, approved by the decree of August 27, 1898.

ART. 6. The present decree will be inserted in the official journal and bulletin of the colony, and posted wherever it shall be deemed proper.

The explanation of this law is that if any octroi duty be imposed on goods coming from abroad, including French imports, similar items produced in the colony must pay the same rates of duty. This new régime has been applied in virtue of a recent decision of the council of state of Paris, and there promulgated in the form of a decree, under date of August 27, 1898, as is usual in such cases.

It is my opinion that the system, if insisted on to the letter, will be found very difficult of execution.

A. TESTART,
Vice-Consul.

ST. PIERRE, *December 24, 1898.*

HOTEL ACCOMMODATION IN PUERTO RICO.

I am constantly in receipt of letters of inquiry from citizens from all parts of the United States concerning hotels and hotel accommodations in Puerto Rico. I conclude from these letters that many of our people have their eyes turned toward this island as a desirable winter resort. I am compelled to reply that the hotel accommodations of Puerto Rico are quite limited, and, when measured by an American traveler's idea of "good hotels," the accommodations are far from first-class.

Hotels are small, few in number, and generally run on the Spanish plan. Hotel rooms are, as a rule, small, plainly furnished, generally lighted from the inside courtyard, with no outside windows, and only a few rooms to each hotel that front upon a street. The cooking in nearly all these hotels is Spanish style. The present rates are not high, the average for room and board being about \$2 per day.

Before the Americans came to this island, a family or private boarding house was unknown; but now they are opening up in every city and large town, until to-day there are quite a number of such houses for the accommodation of the traveling public. Some of them advertise as "American boarding houses," have American cooks, and claim to serve their meals in American style. Weekly or monthly rates can be obtained at these boarding houses, as well as at most of the hotels. Puerto Rico is sadly in need of some good American hotels, and I am informed that several will be built as soon as the heavy duty is removed from American building material. With the delightful winter climate of this island, combined with the beautiful tropical scenery and healthful location, this new possession of the United States is bound to become a very attractive winter resort, as soon as the island is supplied with good modern hotels, good livery stables, and good steamship connection with the large seaport cities of the United States—all of which, I believe, will be paying enterprises if properly conducted.

PHILIP C. HANNA,
*Consul.**

SAN JUAN, *January 16, 1899.*

SOUTH AFRICAN EXHIBITION.

The South African industrial and art exhibition opened December 15 in Grahamstown, a city of 10,000 inhabitants, located on the slopes of the Zuurberg Mountains, and reached by a branch of the Cape railway, which climbs the mountain at a stiff grade.

There are over a hundred American flags in the exhibition buildings, and at the entrance appears the coat of arms of the United States, draped with the Stars and Stripes and the Union Jack. The exhibition main building is 165 by 149 feet. The whole area devoted to the exhibition is about 20 acres.

Rhodesian products are well represented and include a profusion of specimens of gold ore and native stone from the quarries of the country, cut into many beautiful shapes; native lumber, such as teak and mahogany, in planks and carved panels and furniture; native axes, musical instruments, tools, war shields, assagais, witch doctors' tools and whistles, bows and arrows, horns of all shapes and sizes, etc.; and, last but not least, the "jungle," occupying a building by itself covering 10,000 square feet. This exhibit represents a Matabela jungle with specimens of the fauna of the country set up in realistic positions, and is of a kind seldom seen in expositions.

* Since the United States Government has assumed control of Puerto Rico, the consular offices have ceased to exist as such, but Mr. Hanna remains at San Juan temporarily to perform such duties as may be assigned to him.

The exhibit of bicycles is large and consists principally of English manufactures, the only American noticed being the Columbia, which has an attractive exhibit. The United States stands second in the imports of bicycles into this country.

In agricultural implements and tools, both English and American manufactures are shown. Cream separators and butter workers are from Germany. Wire fencing, both barbed and plain, staples for same, springs, axles, horseshoes, carriage and wagon hardware, chains, lathes, planers, drills, tire benders, welding machines, wrought-iron ranges, bent-wood work, scythes, butcher tools, tree clippers, hoes, spades, shovels, rakes, lawn hose, and all kinds of garden tools are exhibited principally by English manufacturers, as are also steel tubing, pipes, valves, thread-cutting tools, wrenches, etc.

All the hams and bacon on exhibition are from England, except one from Iowa, shown by a Liverpool firm; and yet America stands first in imports in this line.

I regret to report that the only American-made vehicles on exhibition are three from a Wisconsin manufacturer. I had hoped to find a large exhibit from the United States, which stands first in this class of imports into this country.

In the line of American novelties, the display is pleasing, including articles from a clothespin to a churn. Of course, all the phonographs, cash registers, and typewriters of the United States attract large crowds, and their booths deserve special mention.

In canned fish, meats, etc., the exhibit is large; but I looked in vain for products of the United States which have had such large sales in this country.

In the lines of clothing, carpets, furniture, household specialties, ales and beers, harness, soaps, flour, corn, samp, cloths, blankets, musical instruments, pianos, hats and caps, boots and shoes, safes, etc., foreign countries alone have exhibited. The same is true of biscuits, fancy cakes, wafers, confectionery, etc.

The colony of Natal occupies a very large space in the exhibit of teas, sugars, canned fruits, cereals, coal, pepper, arrowroot, lime juice, jellies, curry, etc., and is coming fast to the front as a producer of tea and sugar. South Africa being a large consumer of tea and coffee, brands from all over the world were shown. The tea of Natal is made in seven grades, from the blended tea at 28 cents per pound to the common Souchong at 14 cents.

There are also being prepared in South Africa, baking powder, mustard, chicory, coffee, wines and brandies of every variety; chutneys from the banana, mango, tamarind, and tomato; and sirups of all fruits; and the exhibits in this line would be creditable if shown at our world's fair. Fruits as well as meat, fish, etc., are being pre-

served in an antiseptic fluid which is colorless, odorless, and tasteless. In this tropical country, where fruits must be kept sweet until preserved with sugar, this preparation is necessary. I saw a piece of meat that had been simply washed with the fluid which was sweet three days after being killed, while the balance of the animal had to be eaten the day it was killed.

I saw fish and fruit of all kinds immersed in open jars, unsealed, that had been there for months and were as sweet and plump as the day they were caught or picked. In preparing eggs, the following solution is used: One ounce of iodate of calcium to 1 gallon of water. The eggs are dipped in the solution and allowed to dry; but they show no coating or discoloration and can be kept sweet for six months, and, if placed in lime and salt of equal proportions, can be kept over a year. I mention this preservative for eggs as it may benefit shippers of the United States.

There is a fine exhibit of tanned leather in all grades produced here. No oak bark is used, but the following native bark: Black wattle, 37 per cent tannin; cap wattle, 22 per cent; wagon boom, 25 per cent; Cape sumac, 25 per cent; klip hout, 30 per cent. These barks are priced, respectively, as follows, per ton: £7 19s. (\$36.50), £4 10s. (\$21.90), £4 10s. (\$21.90), £6 10s. (\$31.63). Over thirty-seven varieties of leather were shown, all from colonial hides and skins. I saw some very fine leather tanned with alum, both white and yellow, largely used by the farmers for "trek" harness. It is very strong, and requires but little care to keep it in good condition. The tanning of the beautiful Angora goatskins with hair on is an art. The exhibitor stated to me that they tanned their leather in thirty-six days, instead of eight months, the time required by the old process.

I also saw samples of leather tanned or prepared by the natives with fat. The fat is rubbed on the skin and then forced in with their bare feet, the process being repeated until the leather is soft and pliable.

The exhibition, as a whole, is as if a part of one of our own expositions had been transported here. The displays are elaborate; the pagodas and structures, booths and decorations are such as are seen in America. The grounds are well laid out and there are the usual side shows and catch-penny devices, and an American mule from Missouri weighing 2,000 pounds is attracting much attention.

In 1901, after the Paris exposition, it is hoped that the South African exposition will be held in Cape Town, to which many of the Paris exhibits can be sent. As Cape Town is the metropolis of South Africa, and easily reached by sea and rail, I see no reason why it would not be a success.

J. G. STOWE,
Consul-General.

CAPE TOWN, *December 26, 1898.*

BLOTTING PAPER AND SHOES IN SOUTH AFRICA.

In a letter to the National Association of Manufacturers, of Philadelphia,* Consul-General Stowe, of Cape Town, under date of December 29, 1898, says:

Blotting paper is scheduled under the head of "stationery," which includes all kinds of letter, cap, foolscap, and other kinds of writing paper. The value of the stationery imported into South Africa in 1897 was £310,078 (\$1,508,994), of which the United Kingdom furnished £267,502 (\$1,301,798); Germany, £16,900 (\$83,244); and the United States, £14,052 (\$68,384).

I can not find that any blotting paper reached this country from America. It is used here, as in America, largely by the insurance companies and others, for advertising purposes. It comes in white, cream, blue, etc., and in sheets the same size as are made in the United States. It comes boxed in wood or wrapped in heavy manila paper, but it must be borne in mind in packing that the distance from the United States is much farther. If prices are not too high, sales can be made. There is a demand here for printers' supplies, and American ink, type, presses, etc., are asked for. A merchant just said to me that he could not get American goods in this line.

The great bulk of American goods sold in this country comes through the export commission houses of the United States, and these, although they have their men here constantly and have done good work, prefer to sell what will bring returns quickly. Cereals, canned meats, kerosene (paraffin), oils, etc., come from the United States; but most of our manufactures do not receive the attention necessary to introduce them.

I have been giving some time to the trade in boots and shoes, and I find that our manufacturers cut the channel on the soles too wide. With a knife, they cut around the edge of the sole deep into the surface; then, after the shoe is sewed, this flap is pasted down over the stitching. As the sole wears this flap wears, until it soon becomes a "fringe." The English manufacturer cuts into the sole only to the line of the stitching. One large dealer (wholesale and retail) was kind enough to pull loose this flap—and it came away easily—on the American shoe, but on the English shoe there was no flap to pull loose. This same dealer told me that he visited a large manufacturer of rubber shoes in America and was so well pleased with the goods that he was ready to place an order for sixty cases,

*Advance Sheets of this report have been sent the association.

but the manufacturer would not mark or letter the cases for shipment; he said he would deliver them to the dock, but that the buyer must mark them there. In the purchase of a large order of boots and shoes, the manufacturer was asked to number the cases from "76 up," which meant, of course, 76, 77, 78, and so on; but all the cases were marked "76 up."

UNITED STATES TRADE WITH PORT ELIZABETH.

Port Elizabeth is called the "Liverpool of Africa," and through this port most of the goods pass for the South African Republic. It is 839 miles from Cape Town by rail, has a population of over 25,000, and is the second city of Cape Colony in importance. Its exports are wool, hides, feathers, and aloes. The feather and wool market buildings—the feather building alone costing \$350,000—are very large and busy places, for this port is the principal port of export for the South African Republic products.

Our consular agency here was very busy during 1896 and 1897, when large quantities of wool and hides were exported to the United States; and I wish to state that the exports from Africa to the United States, as published in statistical returns, are not correct. For instance, there were exported from Port Elizabeth to the United States in 1897 nearly 1,000,000 hides, all via London; also, about 4,000 bales (100 in bale) of Angora goatskins, besides many of the common goatskins; also, ostrich feathers; and, of course, a large value in diamonds through the office of the syndicate in London. I merely mention this to show that the United States received goods from this country of greater value than tabulated.

As a market for American-made goods, the port is well known several large firms being engaged in this business. During my visit regrets were expressed by business men on account of the announcement that one of the direct lines of steamships from New York had been withdrawn.

I find this is a desirable plow market. For many years, the plow known as "No. 75" has had a large sale. This is a cast plow, with an adjustable wheel on beam, and in sizes from 9 to 12 inch width of cut. It is now evident, from information received, that the cast-iron plow is being superseded by a plow after the same model as the No. 75, but with steel mold, share, and wrought standard, and with wood beam. Large quantities of these plows have arrived from New York and Kentucky makers and are well liked. I was informed

that an all-steel plow like the pattern above described, but with steel beam and handles, would soon be needed, and some are coming in.

It is stated that German makers are producing an all-steel plow at a less price than is asked by Americans. German makers of plows are undoubtedly copying American plows, both walking and riding. It astonished me to learn to what an extent sulky and gang plows have been sold. I was informed by one merchant that he had sold 4,000 of a well-known Illinois riding plow in three years.

A market, I learn, is open for American "overalls," provided the makers will use a copper rivet at the bottom of the "flap," or fly, and at the pockets. I was told the American makers would not comply with the request.

It is to be regretted that so many German and Indian cigars are finding a market in Port Elizabeth. When Cuba once more produces tobacco, it is hoped that the United States will again have its share of the trade.

I found a large quantity of furniture from America. It comes "knocked down," and is put together on arrival in the usual way—with blocks and glue; but it is, so I am informed by a large importer, not possible to make it as strong as is done by the manufacturer, hence there is a demand for furniture that can be easily and strongly put together.

J. G. STOWE,
Consul-General.

CAPE TOWN, *December 20, 1898.*

FOOD SUPPLY IN SOUTH AFRICA.

The question of removing the duty on meat and wheat and animals admitted for slaughter is now before the parliament of this colony. A bill has been introduced and will probably be passed, but can not take effect until similar action is taken by the four other states and colonies composing the customs union. The present high price of meat and the loss of cattle and sheep in South Africa from various causes are the reasons for the introduction of the bill.

In the year ended May 31, 1898, the loss of cattle from rinderpest in Cape Colony was 410,000 head; drought, 40,800. In Bechuana-land, a dependency of this colony, in the two years from September, 1896, to April, 1898, the loss was 174,614. Adding the territories, a total of 1,400,000 were lost. As to sheep, in the period from May, 1897, to May, 1898, the total loss in Cape Colony was: From drought, 873,000; lack of food, 426,500; wild animals and theft, 142,000; total, 1,895,000. Adding those lost in the dependencies of this colony, the loss came to nearly 2,086,000.

In many districts, the drought has become graver since the returns in May, 1898. The number of merino sheep had decreased from 8,900,000 in 1894 to 7,187,000 in 1898. Cape sheep had been reduced from 1,700,000 to 1,300,000, and lambs from 2,700,000 to 2,300,000. Goats are being slaughtered, owing to the scarcity of food; and (with the exception of Angora goats, which increased by 350,000 in the four years) the reduction in goats in this period was from 1,800,000 to 1,637,000. Last year alone, from drought and exposure, the loss was 124,000 in the colony proper.

All over the country, farmers are selling their breeding stock for slaughter; and so depleted of meat stock has the land become, and so high are the prices, that the sale of this breeding stock threatens to bring about a meat famine. The price of beef in the cities ranges from 10d. to 1s. 6d. (20 to 40 cents) per pound, and the price for mutton is about 10d. (20 cents) per pound. It was claimed in parliament that mutton can be delivered here for 2½d. (6½ cents) per pound, which, with the duty, would make 4½d. (10½ cents) per pound. Government cold-storage plants are being advocated, although some contend that the municipalities should erect them.

In reference to wheat and flour, it was stated in the debate that in America wheat was \$1.86 and flour \$2.61 per 100 pounds; that a large fall in price was expected; and that American flour was being adulterated.

As an example of the present high cost of living here, it was said that an employee of the railroad, married and with three children, draws £12 (\$58.40) per month; that he is obliged to expend for food not less than £7 10s. (\$36.50) per month, and for rent a minimum of £4 10s. (\$26.50) per month, thereby using up all his wages, leaving nothing for clothing or education.

Flour is coming in now from the United States; the quotation for the imported article is 17s. 3d. (\$4.27), and that of local manufacture 18s. 3d. (\$4.58) per 100 pounds. Three steamers are just in. Corn meal is also arriving from the United States. This latter article, now regularly imported, is in heavy demand, with inadequate supplies. Shipments on the sea are sold, and this month's imports are large. Quotations are 18s. (\$4.58) per sack of 196 pounds. Samp is arriving this month, and is quoted at 15s. 6d. (\$3.78) per sack. Two ships are now discharging corn and bran from Argentine.

The outlook for a large trade with the United States in cereals, both in the grain and ground, is good. It is to be regretted that the United States can not share in the large quantities of frozen meat to be purchased.

J. G. STOWE,
Consul-General.

CAPE TOWN, *November 30, 1898.*

SCARCITY OF MEAT IN SOUTH AFRICA.

Consul-General Stowe, of Cape Town, on October 29, 1898, says:

The lack of meat supplies in South Africa is assuming a serious aspect. Durban, Natal, is almost without beef. It is stated that the butchers are unable to purchase any slaughter cattle in the colony, the supply being exhausted, and, as the Australian stock of frozen beef has all been consumed and a fresh cargo is still on the water, butchers have intimated their inability to supply customers with anything but mutton until 500 tons of frozen beef now on the way arrive.

In the Transvaal, the outlook for a regular supply of beef for Pretoria is also uncertain, owing to the large supplies which must be used for the troops now in the north on their expedition against the Kaffirs. Shipments from Madagascar have been coming in, but it is reported that the French authorities on that island have forbidden further exportations. Those who have contracted to supply several hundred cattle and sheep will have to obtain them from South America, and it will be a month before they can be delivered.

In Cape Colony, frozen beef and mutton from Australia is, up to this writing, sufficient, but prices have advanced. In tinned (canned) meats the imports have fallen off, owing, I understand, to the war between the United States and Spain, and orders in some cases have been refused.

In other parts of Africa, slaughter cattle are scarce, and abnormally high prices prevail. In Kaffraria, sheep are worth \$10 each, and cattle of doubtful value are sold at \$85 per head at auction.

Will there ever be a line of refrigerator ships from the United States to this country?

TAXATION IN FRANCE.

Replying to the inquiry of a Western university* on the subject of the income tax in France, it may be said that public opinion is still in an unsettled state. The debates in the French Chamber have not yet definitely disclosed the general opinion of the income tax among French statesmen, and I have no means of ascertaining their convictions except through the published records. There certainly are Frenchmen who urge the adoption of the income tax in France, a project of law being now before the public elaborated by the Minister of Finance, M. Peytral, who estimates the revenue

*Advance Sheets of report have been sent to the inquirer.

likely to be derived from this measure at 175,000,000 francs (\$33,775,000) per annum.

The scheme of M. Peytral provides for the calculation of the taxpayer's income based upon methods of living and tangible assets. The system is apparently complicated. First, comes a determination of the rental value of the taxpayer's dwelling, including gardens and all accessories. To do this fairly, the towns and communes are divided into eight classes, according to population. To the income ascertained by a determination of the rental value of the property would be added a sum based upon wages and salaries paid to servants, upon the number of carriages, horses, dogs, yachts, and other similar property owned. The precise sums to be added to incomes by reason of possessions of various sorts are all laid down in M. Peytral's project. For example, in Paris a person employing one female servant would have 800 francs (\$154) added to his taxable income. A two-wheeled carriage would increase his taxable income by 1,000 francs (\$193), whereas the same thing in a commune of small size would add to his total only 200 francs (\$38.60). The amount of income so ascertained would be diminished to the taxpayer by fixed rule in the case of children and aged dependent parents. Omissions in statements furnished to taxgatherers would be punished by increased taxation.

Whether M. Peytral's project will finally be adopted, I can not, of course, say. Taxation is not more popular in France than in the United States; and the question, "Is there much dissatisfaction with the present system?" is easily answered in the affirmative.

At the present moment, there is in Marseilles, for example, a tax on rents, windows, doors, water, weights and measures, posters, signs, and other articles. A resident who pays his landlord 1,500 francs (\$289.50) per year for his house, pays a tax of 208 francs (\$40.14) per annum to the Government. Property owners pay a ground tax. A principal source of revenue by indirect taxation is the "octroi," a tariff levied upon nearly everything consumed in the city. Officers of the "octroi" are to be found at every entrance to all the cities of France, and they collect specific duties on produce and merchandise of every description. This is perhaps the most unpopular form of taxation now existing, and there is a widespread agitation in favor of doing away with it. I am told that in Marseilles, eight hundred persons are employed in collecting and accounting for this octroi tax. If the octroi bureau is abolished, some new source of revenue must be found. The amount of the tax is added to the market prices of commodities, and in many instances the cost to the consumer is thereby rendered excessive.

ROBERT P. SKINNER,

MARSEILLES, *December 24, 1898.*

Consul.

IMPERIAL PENNY POST.

What is described as "John Bull's" Christmas present to the world, or more particularly to the British Empire, is the inauguration of the imperial penny postage, which occurred on Christmas day in accordance with a treasury warrant published in the Official Gazette, establishing a rate of 1d. (2 cents) per half ounce or fraction of half ounce on letters posted in the United Kingdom for transmission to specified British colonies and possessions.

The following is a list of the colonies and protectorates to which the change applies:

Aden.	Leeward Islands—Continued.
Ascension.	Montserrat.
Bahamas.	Malay States (federal):
Barbadoes.	Perak.
Bermuda.	Selangor.
British Central Africa.	Negri Sembilan.
British East Africa.	Pahang.
British Guiana.	Natal.
British Honduras.	Newfoundland.
Canada.	Niger coast protectorate.
Ceylon.	Niger territory.
Cyprus.	St. Helena.
Falkland Islands.	Sarawak.
Fiji Islands.	Seychelles.
Gambia.	Sierra Leone.
Gibraltar.	Straits Settlements.
Gold Coast Colony.	Tobago.
Hongkong.	Trinidad.
India.	Turks Islands.
Johore.	Uganda.
Lagos.	Virgin Islands.
Leeward Islands:	Windward Islands:
Antigua.	Grenada.
St. Kitts.	St. Lucia.
Nevis.	St. Vincent.
Dominica.	

Cape Colony is not included, although Natal is, nor have the Australasian colonies been brought into line as yet; but it is generally believed here that a continuation of the 5-cent rate with the colonies which are now exceptions to the general rule will be but temporary.

Mr. Henniker-Heaton, the champion of postage reform, is naturally jubilant; and in an article contributed to the London Observer he points out that every boat belonging to the steamship lines com-

municating with the British colonies will be "floating British post-offices," and will carry an abundant supply of penny stamps for sale. Moreover, he points out, with some show of pardonable pride, that every squadron and every naval vessel in any part of the world will be a "portion of the British postal territory," and everybody serving thus under the British flag will have his letters forwarded by the shortest and swiftest route to its destination for 1 penny.

Elihu Burritt's famous pamphlet, written as long ago as 1842, advocated the adoption of a scheme of this kind; and our "learned blacksmith," in anticipating universal cheap postage, could well foresee the great advantages likely to accrue from it. The following Reuter's cablegram from Ottawa is significant:

The imperial penny-postage rate came into effect in Canada to-day, and the mail from the Dominion to the Mother Country will be the largest that ever left here.

DANIEL T. PHILLIPS,

CARDIFF, *December 27, 1898.*

Consul.

TECHNICAL EDUCATION IN GERMANY.

German tradesmen and manufacturers are alive to the importance of increasing the efficiency of their mechanics and artisans and improving the quality of their goods. They are resolved that "made in Germany" shall no longer pass as a term of opprobrium, but be a synonym of excellent materials and good workmanship.

Yesterday, there took place in this city a meeting likely to exercise a very important influence in this direction. It was in the nature of a conference, under governmental sanction and direction, to discuss German trade and manufacturing interests and to devise plans for their extension and improvement. It was held at the instance of the Prussian Minister of Trade and Commerce, and was presided over by the Oberregierungs President of the province of Hanover, Count Stollberg. Representatives of the Government from Berlin, the highest officials of the Hanoverian provincial and municipal administrations, leading manufacturers and business men, and delegates from the chamber of commerce, the manual training and artistic trade schools, and from the workingmen's trade unions, attended and took part in the deliberations.

As a result of the conference, it was unanimously resolved—

(1) To establish at once in the city of Hanover advanced lecture courses, in which artisans and apprentices in all trades shall have an opportunity to complete their mechanical education and be instructed by experts how to install and manage a model workshop

and work and use machines and tools to the greatest advantage. Instruction will also be given in bookkeeping, the making and rendering of accounts, the making of estimates of the cost of work and materials, how to conduct business correspondence, drawing, and other practical branches.

(2) The oversight and control of the said lecture courses shall be under the direction of a commission composed of representatives from the imperial, provincial, and municipal administrations, the chamber of commerce, the manual and art schools, and from the trades unions.

(3) The first courses of lectures will be to cabinetmakers, locksmiths, shoemakers, and tailors. Those to other trades will follow.

(4) A fee for tuition will be exacted from mechanics able to pay, but those unable to pay will be instructed free. Funds for the payment of the tuition of the poor will be provided by the Hanover provincial and municipal governments.

(5) Only mechanics and apprentices will be admitted to the classes whose theoretical and practical knowledge is such as to give promise of success as students. The commission has power in all cases to decide as to qualification of applicants for admission.

(6) Teachers are to be selected by the commission and confirmed by the Minister of Trade and Commerce.

(7) The cost of the establishment and maintenance of the lectures is to be supplied by the General Government and the province and city of Hanover, together with the trades unions, the chamber of commerce, and others interested therein.

(8) It is further intended that great care shall be used in teaching apprentices how to obtain the most practical advantages from the knowledge acquired by them in the classes. To this end, the creation of workmen's cooperative societies is to be urged.

(9) A permanent exposition of all power machines and tools used in the small trades is to be established in the Gewerte-Halle (Industrial Hall) at Hanover. The machines exhibited there are to be worked by competent mechanics, who, on request, will exhibit their uses and management to all inquirers.

In connection with the machine exhibition, there will also be established an exposition of sample products, in process of manufacture as well as finished.

(10) In order to enable small manufacturers and tradesmen to purchase their raw materials at wholesale prices and to facilitate the sale of their products, the formation of cooperative stores at designated places is to be encouraged.

I am informed that the establishment of these courses of lectures to mechanics is the initial move in a general plan to be inaugurated

in all the main labor centers of Germany, dependent upon the success of this experiment.

The expositions of tools and machinery proposed to be established in connection with the lecture courses, in my opinion, offer an excellent opportunity to American manufacturers to make exhibits.

In the boot and shoe trade, from the making of the lasts to the finished product, American machines are the favorites. Perhaps the same result might be reached with the other small trades, if masters and workmen in Germany had an ocular demonstration of the superiority of our tools and machines over those they have been using.

W. K. ANDERSON,
Consul.

HANOVER, *December 9, 1898.*

A NOVEL SAVINGS INSTITUTION IN GERMANY.

A few years ago, the City Savings Bank inaugurated a novel method for inducing people, especially the laboring class and small shopkeepers, to save their money. Instead of obliging the people to bring their savings to the bank, the bank undertook to collect from its depositors certain fixed sums weekly. The following is the method pursued:

The application of the new depositor is made either in person or by letter, and must state the address at which the weekly deposit is to be collected and the amount. This amount may be either 50 pfennigs or 1, 2, 3, 4, 5, or 10 marks (1 mark=23.8 cents). The amount to be collected may be changed at any time.

On payment of the first deposit, the depositor is furnished with a pass book, in which the amount of the first deposit and the date is entered. The following weekly deposits are not entered when collected, but only on presentation of the pass book at the bank when a withdrawal of money is made or at the end of the year to balance the account.

The weekly amount is collected by employees of the institution, and, as a receipt, the depositor is given a printed coupon, showing the amount collected, the date, and the number of the pass book.

In order to insure prompt payment, a coupon is presented by the collector. If a coupon which has been returned to the bank by the collector as unpaid is not paid within eight days, the institution reserves the right to close the depositor's account.

All deposits made during one year draw interest from the 1st of January of the following year. The rate of interest is the same as paid by the savings bank on its ordinary accounts—at present $3\frac{1}{2}$

per cent. Deposits may be withdrawn at any time on presentation of the pass book and the coupon for the last payment.

Following are the statistics of this branch of the savings bank for the years 1896 and 1897:

Collected from depositors:	Marks.
1897.....	740, 208. 50= \$176, 170
1896.....	694, 922. 50= 165, 392
Withdrawn by depositors:	
1897.....	649, 671. 05= 154, 622
1896.....	595, 234. 51= 141, 656

At the close of the year 1897, there was a balance of 575,758.01 marks (\$137,030) due 5,485 depositors. At the close of the year 1896, there was a balance of 473,375.19 marks (\$112,663) due 5,263 depositors.

On January 1, 1898, the number of depositors (including new applicants) amounted to 5,799, making a weekly deposit of 15,564 marks (\$3,704), and classified as follows:

	Persons.
Depositing 50 pfennigs (11.9 cents) per week.....	244
Depositing 1 mark (23.8 cents) per week.....	1, 697
Depositing 2 marks (47.6 cents) per week.....	1, 730
Depositing 3 marks (71.4 cents) per week.....	973
Depositing 4 marks (95.2 cents) per week.....	194
Depositing 5 marks (\$1.19) per week.....	604
Depositing 10 marks (\$2.38) per week.....	357
Total.....	5, 799

This branch has not been started by the savings bank as an institution of profit, but merely as an incentive for the poorer classes to save their earnings, and so far has met with great success.

I believe the first institution of this kind was founded in Frankfurt some years ago, and now several other cities of the German Empire have adopted the system.

WALTER SCHUMANN,

MAINZ, *January 4, 1899.*

Consul.

CARE OF ASPHALT STREETS IN GERMANY.

The treatment of asphalt streets here in Breslau is entirely different from methods employed in the United States.

For instance: One man has charge of four squares in front of the consulate. His tools for keeping the streets clean are as follows: An iron-hopper wheelbarrow, a shovel, a broom, and a rubber scraper about 3½ feet long. The rubber is fastened in a vice-like wooden clamp and is about 4 inches wide, one-quarter of an inch thick, and

very stiff. This man during the day is continually going over his four squares, taking up the litter and keeping the streets thoroughly clean. Early in the morning, after having cleaned the street, he takes his wheelbarrow, loaded with very fine, sharp sand, and scatters the same with his hands or a small shovel lightly over the streets, to prevent slipping. Should it be a rainy day, he repeats this process several times during the day. Once a week, two sprinkling cars are sent out alongside of each other, so that they cover the whole street at one time with water, washing the same thoroughly. Immediately following the sprinkling cars come four one-horse roller brush sweepers, about 2 feet in diameter, sweeping the water, slime, etc., into the gutter, when the same is piled up and carted away. Then the man who has charge of those streets comes along with his wheelbarrow and sprinkles sand all over the street. In spring or autumn, when the streets are often sloppy or wet, the washing is done several times during the week.

I am informed the washing is done for the purpose of removing the slime, which the asphalt seems to leave, and to keep the street from being slippery; also for the preservation and hardening of the asphalt.

The man who has charge of the asphalt streets is paid 22 pfennigs (5 cents) per hour. Ordinary street hands are also paid per hour and receive 18 pfennigs (4 cents).

All streets are kept in excellent condition, the shopkeepers or tenants not being permitted to put sweepings on the pavement or street. These must be taken up and put in a box kept for that purpose.

The city has wire baskets fastened on lamp-posts against houses, fences, or trees, in which the public may throw waste paper while walking along. It is very rare to see any waste paper on the streets, as the citizens in general take pride in keeping them clean. The householders have to sweep the streets to the center of the street regularly every morning before 6 o'clock. The litter is piled up and carted away by the city teams.

C. W. ERDMAN,
Consul.

BRESLAU, *January 13, 1899*

PRACTICE OF PROFESSIONS IN JAPAN.

In compliance with a request from the secretary of the University of New York,* Consul-General Gowey sends from Yokohama, under date of December 21, 1898, a summary translation of the laws of Japan relative to the practice of the professions of law, veterinary surgery, medicine, and dentistry, together with a list of schools devoted to these subjects.

LAWYERS.

Anyone who desires to practice law must pass the examination which is to be held once a year, and must obtain the permission of the Minister of State of Justice, and then he can practice in the supreme court and other courts. A minor, a bankrupt who has not completed the obligation of compensation, a person convicted of a theft or fraud, an official or a public or private employee, is debarred from obtaining such permission. A practitioner must join a guild of lawyers where he chooses to locate and observe its rules and regulations. The registration fee is 20 yen (\$9.96), and the sum of 10 yen (\$4.98) is to be paid as a fee at the time of examination. Violation of the provisions to be observed by the members of the bar is punishable by censure, by suspension of avocation for not more than one year, or by a fine of not more than 100 yen (\$49.80), or by "jornei," in which case the lawyer's name is expunged from the register and he is not entitled to continue the profession until three years have elapsed, or be disbarred for life, according to the gravity of his offense. In the case of a graduate of the law college of the Imperial University he is exempted from passing the examination, but is required only to apply for a license for practicing.

VETERINARY SURGEONS.

This profession can be followed only by one who has obtained license from the Minister of State for Agriculture and Commerce.

Those enumerated below may obtain the license: One who has passed a veterinary examination and holds a certificate; one who holds a diploma of a governmental veterinary school or a certificate that he has passed a special course of the veterinary department of an agricultural college; one who holds a certificate that he has passed a special course of the veterinary department in a public or private school, the curriculum of which has had the approval of the Minister of State for Agriculture and Commerce; one who holds a graduation

* Advance Sheets of the report have been furnished the correspondent.

certificate of a governmental or public veterinary school in a foreign country.

A license fee of 1 yen (49 cents) must be paid; a renewal of license on account of loss can be made upon the payment of 50 sen (24 cents).

A suspension of business for not less than five days and not more than fifty days, or entire prohibition of occupation, may be adjudged, if there be any offense with regard to veterinary practice or improper conduct, by the Minister of State for Agriculture and Commerce, according to the circumstances of the case. This prohibition may be rescinded after three years have elapsed, if deemed advisable, in which case the practitioner must apply for a fresh license.

A fine of not less than 5 yen (\$2.49) nor more than 50 yen (\$24.90) will be imposed upon one who has practiced veterinary medicine or surgery without obtaining a license. A fine of not less than 2 yen (99 cents) nor more than 25 yen (\$12.25) will be imposed upon one who follows the business while he is under suspension.

A penalty of not less than 1 yen nor more than 1.95 yen will be imposed upon a veterinary surgeon who shall have refused to comply with the request of others for professional services, without proper reasons therefor.

The Minister of State for Agriculture and Commerce may issue a provisional license to a person who has none of the qualifications enumerated above, but whose antecedents merit such favor, by limiting the area of operation and the period of practice, upon the recommendation of the chief of the Hokkaido Cleo or by a governor of any prefecture where veterinary surgeons are scarce.

MEDICINE.

Any person who desires to practice medicine must pass an examination before a committee annually appointed by the Minister of State for Home Affairs. The fee for a license to practice is 20 yen (\$9.80). The alumni of the medical college of the Tokyo Imperial University and of the medical departments of the first, second, third, fourth, and fifth high schools and one of the medical schools of Osaka, Kyoto, and Aichi are entitled to practice without passing the examination, the only requirement being to apply for and obtain license.

A physician who shall have committed an offense, or one who has been guilty of improper conduct in a professional way, may be suspended or prohibited from practice by the Minister of State for Home Affairs, after full inquiry has been made by the central sanitary board.

DENTISTRY.

After study of at least two years, one who desires to practice dentistry can apply for examination, which is held annually. This must be passed before he can procure a license, the fee therefor being 8 yen (\$3.98).

The penalty clause that applies to physicians is also enforced in the case of dentists.

PHARMACY.

One must be over 20 years of age, pass the examination, and obtain license from the Minister of State for Home Affairs before he can practice pharmacy. The license fee for practicing is 3 yen (\$1.47). He can prepare medicine only in accordance with a prescription of a physician, in which the name of the patient, age, name of medicine, quantity, directions for use, quantity to be taken by the patient, date, and name of the physician are described. A prescription for a poisonous or astringent medicine must be signed by a druggist and be kept for a period of ten years. One who practices the business of pharmacist without obtaining governmental sanction will be punished by a fine of not less than 10 yen (\$4.98) nor more than 100 yen.

Law and medical schools.

Name.	Public or private.	Locality.
<i>Law schools.</i>		
Law College, Tokyo Imperial University.....	Government...	Hongo Ku, Tokyo.
Third High School.....	do	Kani Kio Ku, Kyoto.
Wafutsu Law School.....	Private	Kojimachi Ku, Tokyo.
Senshin Gakko.....	do	Kanda Ku, Tokyo.
Melji Horitsu Gakko.....	do	Do.
Tokyo Hogaku Institute.....	do	Do.
Keio Gijiku.....	do	Shiba Ku, Tokyo.
Nippon Horitsu Gakko.....	do	Kanda Ku, Tokyo.
Horitsu Kajiku.....	do	Yonezawa City, Yamagata Ku.
Kansai Horitsu Gakko.....	do	Kita Ku, Osaka.
Hogaku Koshin Kai.....	do	Yamaguchi City, Yamaguchi Ku.
Inan Horei Gakko.....	do	Tokushima City, Tokushima Ku.
<i>Medical schools.</i>		
Medical College, Tokyo Imperial University...	Government...	Hongo Ku, Tokyo.
Medical school of the Tokyo Jikei Institute.....	Public.....	Tokyo.
Saisei Gakusha.....	Private.....	Do.
Medical department of First High School.....	Government...	Chiba City.
Medical department of Second High School.....	do	Sendai City.
Medical department of Third High School.....	do	Okayama City.
Medical department of Fourth High School.....	do	Kanagawa City.
Medical department of Fifth High School.....	do	Nagasaki City.
Osaka Furitsu Medical School.....	Public.....	Osaka.
Kyoto Furitsu Medical School.....	do	Kyoto.
Aichi Medical School.....	do	Nagoya City.
<i>Dentistry schools.</i>		
Tokyo Dentistry Specialty Medical School.....	Private.....	Nihonbashi Ku, Tokyo.
Takayama Dentistry School.....	do	Shiba Ku, Tokyo.
Aichi Dentistry School.....	do	Nagoya City.

Law and medical schools—Continued.

Name.	Public or private.	Locality.
<i>Veterinary schools.</i>		
Agricultural College, Tokyo Imperial University.	Government...	——, Tokyo
Azabu Veterinary School.....	Private.....	Azabu Ku, Tokyo.
Tokyo Veterinary School.....	.....do	Ushigome Ku, Tokyo.
Nilgata Veterinary School.....	Public.....	Nilgata City.
Iwate Veterinary School.....	.....do	Morioka City.
Kobé Veterinary School.....	Private.....	Kobé City.
Saiyo Shiko.....	.....do	Gifu City.
Veterinary department, Osaka Fu Agricultural School.	Public.....	Osaka.
Veterinary department, Ishikawa Ken Agricultural School.	.....do	Komatsu Machi, Ishikawa Ken.
Veterinary department, Yamaguchi Ken Agricultural School.	.....do	Ouchi ——, Yamaguchi Ken.
Kumamoto Veterinary School.....	Private.....	Hiyoshi ——, Kumamoto Ken.
Veterinary department, Oita Ken Agricultural School.	Public.....	Usuki Machi, Oita Ken.
Miyazaki Ken Veterinary School.....	.....do	Miyazaki City, Miyazaki Ken.
Veterinary department, Miyagi Agricultural School.	.....do	Shiogasaki ——, Miyagi Ken.
<i>Pharmacy schools.</i>		
Medical College, Tokyo Imperial University....	Government...	Hongo Ku, Tokyo.
Medical department, First High School.....	.....do	Chiba City.
Medical department, Second High School.....	.....do	Sendai City.
Medical department, Fourth High School.....	.....do	Kanagawa City.
Medical department, Fifth High School.....	.....do	Nagasaki City.
Medical School.....	Private.....	Shitaya, Tokyo.
Kioritsu Medical School.....	.....do	Kita Ku, Osaka.
Aichi Medical School.....	.....do	Nagoya City.
Toyama Medical School.....	Public.....	Toyama City.
Kumamoto Medical School.....	.....do	Kumamoto City.

JEWS IN PALESTINE.

In view of the impetus given the Zionist movement by the second Zionist congress, held at Basel in September, and also by the Palestine journey of Emperor Wilhelm II, the present status of Jews in Palestine becomes a matter of general interest.

Out of a total population in Palestine of some 200,000 souls, about 40,000 are Jews, as against 14,000 twenty years ago. In Jerusalem, there are 22,000 Jews, half of whom have immigrated from Europe and America and are called Aschkenazim to distinguish them from the oriental Israelites, the Sephardists.

Nine hundred and sixty families, numbering about 5,000 souls, inhabit the twenty-two Jewish colonies in Palestine which have been founded and subsidized by Europeans—ten by Baron Edmond de Rothschild, representing the Alliance Israélite Universelle; the rest by the Jewish Colonization Association and by the Odessa Company.

The idea of gathering in Palestine homeless Jews scattered all over the globe was championed in the forties by Moses Montefiore, but with indifferent success. In the eighties, however, the immigration of Jews to Palestine assumed significant proportions.

Of the twenty-two present colonies, the "Jacob Memorial" is the largest, supporting more than 1,000 souls. It boasts a graded school (five teachers), a synagogue, etc., and 4,000 acres of land under cultivation, on which are raised fruit (chiefly grapes), honey, and mulberry leaves, the rearing of silkworms being a leading industry.

The "First to Zion" is another quite important colony, owning 2,000 acres of land. Some forty two-storied stone dwelling houses greet the eye of the approaching stranger; also a school house with a Hebrew library, a synagogue, and a hospital. One million five hundred thousand vines and 25,000 olive, almond, orange, and mulberry trees belong to this colony, which also possesses famous wine cellars.

The "Hope of Israel," a mile beyond Yafa, in the plains of Sharon, is perhaps best known for its agricultural school, in which one hundred or more pupils are taught gardening. Recently, a high school for Jewish girls was established in Yafa.

The "Head Corner Stone," amid the hills beyond Tiberias, with snow-capped Hermon in the background, is another quite prosperous Jewish colony in Palestine. Being near the source of the Jordan, water is plentiful; and its situation, high up above the level of Lake Gennesareth, insures fair climatic conditions.

In the "Door of Hope," dairy farming is profitably followed and experiments made in tea planting. This colony is said to have 1,000,000 vines.

Entirely irrespective of whether or not the Zionists will succeed in awakening in the Jewish people a national spirit and forming a Judean monarchy or republic, with its parliament in Jerusalem and its representation in foreign capitals, the present agitation makes for the development of a country which is but a shadow of its former self, and which will generously respond to modern influences. The Sultan seems quite disposed to grant railway, harbor, and other franchises, and it is possible that the new Jewish Colonial Bank, the organization of which was decided upon in Basel, will be permitted, under certain guaranties, to play an important part in the industrial advancement and growth of Palestine. The movement is furthermore bringing out new qualities in the Jews residing in Palestine. They are no longer content with studying the Talmud and living on charity, but are waking to the fact, as the Hebrew would put it, that to till the ground is worship of God.

It should not be inferred from statements here made that peace

and prosperity have suddenly become the lot of the Jews in Palestine. Only a few days ago, Rev. William King Eddy, of Sidon, returned from beyond the Jordan, and he informs me that a Jewish colony situated not far from El Mzerib (on the caravan route from Damascus to Mekka) was recently attacked by predatory Bedouin tribes. The settlers were all driven away, their gardens and crops destroyed. Even a road built by the Jews to connect their frontier colony with older ones in Galilee, west of the river, was at least partially obliterated. Taxes are more oppressive than ever, officials are corrupt, and prohibitive measures regarding immigration are still in force, although inadequate.

I think, however, I am justified in saying that the prospects are brighter than ever for the Jews in Palestine and for Palestine itself. European influence has obtained a foothold in the country, and the tide of modern ideas can not be long debarred.

Only four or five weeks ago, an English company announced its determination to build a broad-gauge railway from the sea at Haifa through the very heart of Samaria and Galilee to Damascus and on to Bagdad, and active operations have already commenced.

In connection with the development of Palestine, I quote the following from an article by the Vienna correspondent of the London Times (November 25, 1898):

The following particulars are taken from an interesting official account of the commercial situation in Palestine. A steamship service calling regularly at Gaza would suffice for the moment to open up the extensive hinterland of that port, the population of which may be estimated at 80,000. This would immediately revive the lively intercourse which prevailed in ancient times, as well as in the Middle Ages, between Gaza and Egypt. Moreover, Gaza would appear to be the natural terminus of a railway which, passing via Ma-an, Kerak, Madaba, and Es-Salt, would form a junction at Mzerib with the existing Hauran line. This would reopen both to civilization and colonization the anciently cultivated territory east of the Jordan, in which the ruins of innumerable towns prove that it was at one time thickly populated. The newly founded German Oriental Company (*Deutsche Orientgesellschaft*) will probably devote increased attention to the colonization of Palestine. It will be perfectly justified in doing so, as there are few places on the surface of the globe which offer such rich reward for comparatively slight labor. In those districts there are no immense primeval forests to be felled and uprooted, no constant struggle against hostile oborigines, no rapacious animals, and no malignant diseases. It has a mild and, on the whole, healthy climate. The soil is of inexhaustible fertility, and there is a sufficient water supply. The natives are peaceably disposed, and even the Bedouins on the frontier have, through their long contact with the settled population, become more tractable and friendly.

G. BIE RAVNDAL,

BEIRUT, *December 1, 1898.*

Consul.

APPARATUS FOR STOPPING SHIPS.

The agent of the Austrian Lloyd Steam Navigation Company in Venice has brought to my notice an interesting series of experiments recently conducted at Fiume by the director of the Lloyd shipyards. The experiments tested the efficiency of an invention by a Hungarian engineer, Mr. Svetkovich, for stopping vessels under full steam. The Austrian Lloyd placed its towboat *Clotilde* at the disposal of the inventor, and three trials were made to test the invention under different conditions.

This marine brake is a sort of parachute of fine spring-steel plates which, when out of use, fit into one another and hang above water.

For the first trial, the apparatus was attached to the stern of the *Clotilde*, and the steamer put on full steam. When maximum speed was attained—in Austrian reckoning, 9 miles per hour—the retaining hook was released, and the parachute plunged into the water. With a scarcely perceptible shock the vessel came to a standstill in 30 feet. It was found, however, that the rods and guys supporting the brake were badly strained. If they had not yielded, the shock would have been much more severe. The fact that the supports did yield did not argue seriously against the efficacy of the brake, but was attributed to the provisional character of the arrangements.

The second trial was designed to show how far the vessel would proceed when her engines were stopped at full speed, no brake being used. The distance was found to be 300 yards.

The third trial measured the forward movement when the engines were reversed from full speed ahead to full speed astern. This time the *Clotilde* stopped in 60 yards.

While the second and third trials were in progress, the marine brake was refitted with more powerful supports, and a fresh experiment was made. This time the vessel stopped almost instantly.

These results, while hardly to be considered valid for the powerful ocean liners, with which the necessity for a quick stop is occasionally so crucial, indicate that an important principle has been introduced among marine safeguards. The Austrian Lloyd Company is awaiting with interest the results of an improvement which Mr. Svetkovich wishes to add to his device, and seriously contemplates equipping its great fleet with the useful apparatus.

H. ABERT JOHNSON,

VENICE, January 14, 1899.

Consul.

NOTES.

Notes from France.—Consul-General Gowdy writes from Paris, February 3, 1899, that the French Minister of Commerce and Industry has communicated a number of items to the business public of France which are interesting as an evidence of the activity of the country in promoting trade with other nations.

The following is a brief translation of his communication :

An imperial decree of the Japanese Government declares that all merchandise which is to receive the benefit of the conventional tariff should be accompanied by a certificate of origin, delivered by the Japanese consul at the place of shipment or by a commercial consular agent. By virtue of an arrangement entered into on the 31st of December, 1898, by which French commerce is entitled to privileges as the "most-favored nation," chambers of commerce in localities where there is no diplomatic or consular representative of Japan are empowered to deliver the certificate of origin.

EXHIBITIONS OF SAMPLES OF GOODS.

The French chamber of commerce of Charleroi has just forwarded to the chamber of commerce of Roubaix two collections of samples of woolen duck, flannels, and cotton dimity, tartans, bonnets, linings, and Vaughan made in England and Holland. These samples, accompanied by explanations, will be forwarded to the chambers of commerce of Amiens, Rouen, and other points; to the consulting chamber of arts and industries of St. Dié; and to the Manufacturers' Association of Lyons. If other chambers of commerce or manufacturers' associations wish to examine this collection of samples, they have only to make known their wishes to the chamber of commerce of Charleroi.

FRENCH COMMERCE IN SMYRNA.

The French consul in Smyrna writes that the commerce of France is growing very rapidly in that quarter, and that it can, by energetic work, be made to assume much larger proportions.

Congress for Commercial Instruction.—The Department has received the following from the Italian embassy, dated Washington, January 2, 1899:

The international congress for commercial instruction will meet at Venice and will remain in session from the 4th to the 8th of May next, at the palace of the Royal Commercial High School. Its object will be to continue the studies initiated at its preceding meetings held at Bordeaux (1885-86), London (1897), and Antwerp (1898).

In the next congress, of which the Minister of Foreign Affairs, the Minister of Commerce, and the Minister of Public Instruction of the Kingdom have been made honorary presidents by the committee of arrangements, the most prominent foreigners who make a special study of commercial matters will take part, and many

gentlemen of high repute in trade and manufactures have already consented to participate.

It is now desired to secure the adhesion to the congress of foreign governments and the participation of their representatives, in order that the work of the preceding meetings may, in that of next year, yield the fruits that are expected of it and reach those authoritative conclusions which progress in this wide field requires.

In pursuance of the instructions which I have received from my Government, I have the honor to invite the United States Government to take part in the aforesaid congress and to send, as its representatives, such special delegates as, owing to their competency, may contribute to the success of the labors of that body.

The regulations adopted for the next meeting will be transmitted in due time.

Under date of January 23, the regulations for the congress were transmitted by the embassy. They prescribe that all persons making application to the committee of arrangements before March 31, 1899, and paying the contribution fee of 10 lire (\$1.93) to the treasurer, Mr. Alessandro Berti (Foscari Palace), will become active members of the congress and will have the right to all of its publications. The programme of subjects to be discussed will be decided by the executive council of the committee of arrangements, and will be communicated to all the members at least four months before the opening of the congress. The committee of arrangements will receive suggestions on the programme up to two months before the opening of the congress. Authors are requested to indicate any reforms which might be introduced in commercial instruction. Members can speak in Italian, French, English, and German. Interpreters of the last two languages will assist at the sessions.

Veterinary Congress at Baden.—The Department has received from the German embassy at Washington, under date of January 21, 1899, notice of the international veterinary congress to be held at Baden on August 9–14, 1899. The subjects to be discussed include prophylactic measures to prevent the spread of cattle diseases by the export of animals, treatment of tuberculosis in domestic animals, use of flesh and milk of animals affected by tuberculosis and requirements for inspection of meat, cure of foot and mouth disease and diseases of swine, dissemination of veterinary instruction, preparation of a uniform anatomical nomenclature in veterinary medicine, and cure of rabies. The members of the congress shall consist of delegates from foreign countries and the German Empire, representatives of veterinary schools who are designated to the committee, delegates of veterinary and agricultural societies, representatives of state and communal offices of public health and public hygienic institutes, and veterinarians who record their names and pay 12 marks.

Primary Education in France.—Consul Brunot sends from St. Etienne, under date of January 23, 1899, a report upon primary education in France, the full text of which has been transmitted to the Bureau of Education. Mr. Brunot notes that children are obliged to attend school until they have reached the age of 13 or have received a certificate showing that they have passed a certain examination. The State primary schools are of three kinds: The maternal (for children of both sexes between the ages of 2 and 6, which are under female teachers, the children passing a medical inspection twice a week); the infant school, to which children between 4 and 7 are admitted; and the primary, in which the sexes are separated. Children who have reached the apprenticeship age, or who are employed on farms, may be excused from attendance upon all classes. Children taught at home are liable at the end of every two years to be called upon to pass an examination in the subjects taught in the public schools, corresponding to their age; if the examination does not give satisfactory results, the children are placed forthwith in a public or private school. The total number of primary schools in 1897 was 83,465.

British vs. American Consular Reports.—On January 11, 1899, Consul Marshal Halstead, of Birmingham, transmits the following editorial from the *Mechanical Engineer*, London, January 7:

Our manufacturers have long complained of the inadequate service rendered to the commercial interests of the country by its consular representatives abroad, and latterly, efforts have been made by the Foreign Office to remove some of these reproaches; but the reports sent by British consuls for the guidance of manufacturers at home are often greatly lacking in the technical information which the manufacturers here would most prize. One set sermon seems to underlie the basis of the majority of these reports, which is the prejudice of British manufacturers in adhering to their own ideas of design, the lack of representatives abroad familiar with the languages and customs of foreign clients, and the refusal of English manufacturers to fall in with the metric system of weights and measures. Whilst it may be readily admitted that there is force in some of these criticisms, one can not but feel that the reiteration of these points is made to cover a considerable amount of indifference on the part of consuls respecting the real technical needs of manufacturers and makers at home. The reports of American representatives to their Government are often in striking contrast to those of our own, and as an illustration of the kind of report which our manufacturers would prize, we should like to draw the attention of our authorities to the extracts from an advance report* by Mr. Halstead, the American consul at Birmingham, given on another page, in which the wants of English customers of American tools are summarized for the benefit of manufacturers in the States. The opinion is just the kind which tool makers across the Atlantic will appreciate, and which will help them to maintain their superiority in those sections of our markets which they have gained by their ingenuity and adaptability.

* To appear in *Commercial Relations*, 1897-98.

South African Imports of Cotton Goods.—Consul-General Stowe, of Cape Town, on December 23, 1898, writes:

Owing to recent conversations with merchants and manufacturers at the South African exhibition, my attention has been called to the limited amount of cotton goods, both in sheetings and plain, dyed, and printed piece goods, imported into this country from the United States. I am surprised at the small value we send, compared with the exportations of the United Kingdom. I have not been able to find that any decided effort has been made by our manufacturers, through the export commission houses of America or through direct representatives of American manufacturers, to capture a share of this trade. I trust the manufacturers of America will give this market some attention, and I am ready to furnish any information they may desire. The imports into South Africa in 1897, with the exception of the port of Lourenço Marquez, in Portuguese territory, were:

United Kingdom.....	\$3, 519. 919. 98
Belgium.....	29, 474. 76
Germany.....	97, 333. 00
Holland.....	18, 098. 51
India.....	5, 007. 63
France.....	2, 686. 31
United States.....	30, 488. 62

Hog Industry in South Africa.—Consul-General Stowe writes from Cape Town, under date of January 19, 1899:

In a recent letter to this consulate, the secretary of agriculture of Cape Colony says:

With reference to your letter dated 27th ultimo, relative to the above subject, I am directed to state for your information that the hog industry in this colony is still in a very primitive state and that no systematic pig breeding on a large scale, from which the desired information could be obtained, has been carried on. The ordinary hog seen in this country is a very active animal, flat sided; razor backed, long snouted, and covered with bristles like pin wire, and has been but little improved by occasional importations of the better class of European breeds.

It would seem that an opening for fresh pork is at hand. But few hogs are raised, and, as stated above, they are not of a choice quality. Not much over 5,000 pounds was imported for 1898, and all from Australia, where, I am informed, stock raising is principally in cattle and sheep. If the time ever comes when steamers with cooling chambers sail from the United States, pork could be made an important part of the cargo.

Salted pork in the form of bacon and hams is imported in large quantities, principally from Great Britain, and sliced ham and bacon in tins come from the United States.

Tax on Joint-Stock Companies in Cape Colony.—Consul-General Stowe, of Cape Town, on January 6, 1899, informs the Department that, by an act passed by the parliament of Cape Colony, on December 23, 1898, all foreign joint-stock companies doing business in the colony through a representative must take out a yearly license, and for said license there shall be paid a tax of 1s. (24.33 cents) for every £100 (\$486.65) or fraction of £100 of the subscribed capital stock. The American Tobacco Company, adds Mr. Stowe, the Standard Oil Company, and all other United States corporations doing business in the colony must pay the said tax. He is informed that the Chartered Company of Rhodesia and other companies are withdrawing their offices.

Demand for Hay in South Africa.—Under date of December 30, 1898, Consul-General Stowe, of Cape Town, says:

I would like to obtain information from some dealer in hay as to the price of baled hay per cwt. f. o. b. New York or other port, together with the freight per hundred to Cape Town. No hay is on hand in this country, and oat straw, or "oat sheaf" as it is called, is used. This is selling to-day at from 4s. to 7s. (97 cents to \$1.70) per 100 pounds. If baled hay of good quality can be delivered here at, say, from \$15 to \$20 per ton, sales could be made. Will someone inform this consulate the price of "alfalfa" hay and seed, the hay to be baled, delivered here?

Salt in Paraguay.—Consul Ruffin writes from Asuncion, under date of December 16, 1898:

There is an excellent opening for United States capital in the salt mines situated 6 miles from the Asuncion market, along the Paraguayan River, accessible to boats for shipment. The extent of the deposit I am unable to state. I think, however, that a hundred wells could be bored and the supply would be ample for a large establishment. At present, the mine is worked by one man and a little boy. There is no machinery for refining; only a rude evaporating pan about 3 by 9 feet, and an old-fashioned well about 3 yards deep and a yard in circumference.

The product is carried to Asuncion by ox carts, and there is a sale for all that can be produced.

The many large estancias, or ranches, with their thousands of cattle, would create a good market for salt. Last year, about 3,828 tons of common salt were imported, the official value at the custom-

house being \$23,035 gold, and duty being 25 per cent; of fine salt, some 17,116 pounds were imported, the official value being \$814 and the duty 25 per cent.

The concession for the mine can be bought for about \$4,000. I believe this investment would be profitable.

British Agriculture in 1898.—Consul Marshal Halstead sends from Birmingham, under date of January 3, 1899, a newspaper review of agricultural conditions in Great Britain during the past year. The wheat and barley yields, it appears, are the largest recorded, and the oats harvest has been exceeded only twice. The acreage in wheat was 2,102,206, an increase of 213,045 over 1897; there were 1,903,666 acres in barley, a decrease of 132,024 acres as compared with the preceding year; the acreage of oats also showed a decrease, being 2,917,760 in 1898. The yield in bushels was: Wheat, 73,028,856; barley, 68,051,918; oats, 118,920,917. Experiments made in sugar-beet growing have resulted in an average yield of 19 tons 17 cwt. per acre, proving that good commercial sugar beets can be grown well in England, as the average for Germany in the same year was 11.13 tons, and for France 11.11 tons. The beets are larger than those grown in America and are exceptionally rich in sugar. An important incident of the year was the advocacy, in a speech by the Minister of Education, of the establishment of a national system of agricultural education, to be grafted on the elementary schools in all rural districts.

The full text of the report has been sent to the Department of Agriculture.

Diseases of Animals in Germany and Italy.—Consul Baehr writes from Kehl, under date of January 20, 1899, that the murrain and foot rot have been reported to exist among animals in Alsace-Lorraine for the last eight or ten weeks. They are found not only in rural districts, but in cities, especially in dairy establishments. The report of the statistician of Strassburg states that at the end of December, the disease was epidemic within the limits of eighty-six municipalities. Cattle to the number of 2,500 and hundreds of hogs, and also some goats, were infected.

Consul Cramer, of Florence, on January 10, 1899, says that the horses of the city are afflicted with intestinal inflammation, accompanied with derangement of the brain. The disease is endemic and infectious, and of 300 horses attacked, 35 have died.

Copies of these reports have been sent to the Department of Agriculture.

Electric Tramways in Moscow.—Consul Smith, of Moscow, on January 21, 1899, writes:

The city council of Moscow has made known that it will publish in Russian and foreign newspapers a statement, on the 12th of February, advising all contractors who are desirous of bidding for the construction of electric railroads in the city to make applications to the city council not later than the 12th of April. The sum of 750 rubles (\$375) must accompany each application. The council will give all parties presenting applications the terms and conditions of the concessions, with all necessary drawings and statistics as to the working of the tramways in Moscow for the past five years, profits of the different localities, list of lines existing, and approximate prices for making out the estimates.

For foreign bidders, there will be issued copies of the contracts printed in foreign languages, which will be sent on demand to all electrical companies. Copies will be sold to all applicants desiring particulars of the contract to be issued. The date of presenting the final tenders will be October 1, 1899.

Exhibition of Electrical Appliances in Brussels.—Under date of January 25, Consul Roosevelt, of Brussels, says:

At a meeting held January 20 by the Belgian Society of Electricians (Mr. Emile Closset, No. 26 rue St. Jean, Brussels, president), it was decided to open an exposition of all sorts of electrical appliances applicable to domestic uses. The exposition will be held next May in the new post and telegraph office, Place de la Monnaie, Brussels. It is the purpose of the society to make a complete exhibition of the various uses to which electricity may be applied in the household. Besides appliances for illuminating purposes, there will also be exhibited small motors for operating dumb waiters, cleaning and polishing shoes, heating kitchens, cooking stoves, bathrooms and bath tubs, electric teapots, sad irons, domestic telephones—in fact, all appliances operated by electricity—with a view to the total suppression of the use of coal for domestic purposes.

Freight Rates for Russian Kerosene.—Under date of December 28, 1898, Consul Smith, of Moscow, says:

The committee of the Ministry of Finance has held a meeting to decide the question of a concession to be made on the export of Russian petroleum to Germany. It has been determined, from the

1st of February, 1899, to change the rate of transport on the Trans-Caucasian Railway. Instead of the usual price of 19 copecks per pood ($9\frac{1}{2}$ cents per 36 pounds), it will be 12 copecks per pood (6 cents per 36 pounds) on kerosene, the explosive gravity not to be less than 28° ; and on mixed and heavy oils, not less than 15 per cent.

Export of Russian Tobacco.—Consul Smith, of Moscow, writes on December 28, 1898:

The export of tobacco and cigarettes manufactured in Russia is increasing. From the 1st of January to the 15th of August, 1898, Russia has exported about 2,315 poods (36 tons) of Crimean and Caucasian tobacco, and about 3,500,000 cigarettes. The principal consumers of the above products are France and Germany.

Government Iron Foundry in Japan.—Consul-General Gowey sends from Yokohama, January 27, 1899, a newspaper clipping, which is abbreviated as follows:

[From Japan Times, January 27, 1899.]

The expenditure for the establishment of an iron foundry in Fukuoka prefecture, as approved by the ninth session of the Imperial Diet, amounted to a little over 4,000,000 yen (about \$2,000,000) as a starting fund, to be met by a portion of the indemnity and by floating loan bonds. This starting fund, with the approval of the twelfth session of the Diet, was increased to 10,000,000 yen (\$5,000,000), in round figures. The Government has further applied to the current session of the Diet for the appropriation of an additional sum of 3,600,000 yen (\$1,800,000) towards the expenditure in question, thus making the total amount of the capital for the establishment of the Government iron foundry as follows: Out of indemnity, 579,000 yen (\$289,500); public loans, from 1897 to 1904, 14,122,000 yen (\$7,061,000); sinking and floating funds, 4,500,000 yen (\$2,250,000); total, 19,202,000 yen (\$9,601,000).

Mining Concession in China.—Under date of December 15, 1898, Minister Conger, of Pekin, says that a concession has been granted E. Sabbione, an Italian associated with the Pekin Syndicate, to work coal and iron mines in the prefectures of Hang-chou and Hu-chou, in West Chinkiang. The mines, it is stated in the concession, are to be worked in accordance with the recently promulgated regulations for mines and railways.*

* See p. 556, *ante*.

American Railway Cars in Australia.—Under date of January 14, 1899, Consul Goding writes from Newcastle:

I have arranged for the purchase from American manufacturers of a railway combination car, to cost approximately £1,000 (\$4,860). There is a general awakening to the fact that what the people here want can be furnished by American manufacturers at a much less cost than by other countries. I am doing what I can to encourage this idea, and my efforts, I think, will be followed by good results.

Demand for Coffee-Plantation Machinery.—Consul Halstead writes from Birmingham, January 19, 1899:

This morning I received a letter from the owner of a coffee plantation in India, asking to be put in communication with some American firms who manufacture machinery for the following purposes: (1) The cultivation of land for the growth of fruit trees and coffee; (2) the curing and preparation of coffee; (3) the roasting and grinding of coffee. If manufacturers of the goods named will send me catalogues, I will give them to the gentleman making the request.

American Broom Handles Wanted in England.—The following, dated Birmingham, February 10, 1899, has been received from Consul Marshal Halstead:

A brush manufacturer here, who has been purchasing broom handles from a merchant firm dealing in articles of American manufacture, writes me asking for the name of a broom-handle manufacturer, stating that the firm he buys of has never been able to fully satisfy his needs. In reply to my inquiry, the firm confirms the brush manufacturer's statement, saying:

We have already been doing business in broom handles with the concern you mention, but, owing to the great scarcity of broom handles at the present time, we have some difficulty in supplying them.

I am interested in knowing why there should be a scarcity in American broom handles.

American Canned Goods in Germany.—Consul Brundage, of Aix la Chapelle, writes as follows, on January 16, 1899, concerning the tariff assessed upon American canned goods in Germany:

I received a small consignment from the United States, for my personal use, last week, viz: Two dozen 2-pound cans of pumpkin, 2 dozen 2-pound cans of corn, 1 dozen 1-pound cans of cove oysters, 2 dozen 2-pound cans of clam chowder, and 2 dozen 2-pound cans

of peaches. The total value of same, as billed in the United States, was \$12.10; net weight, 228 pounds (boxing included). I paid as customs duty the sum of \$14.85. I write this fact as it best answers inquiries by exporters of canned goods seeking sales in Germany; they are virtually prohibited. They are classed as "conserves," and as such are dutiable at the rate of 60 marks (\$14.28) per 100 kilograms (220 pounds), or a fraction over 7 cents per avoirdupois pound, including packing.

English Demand for Chaff Cutters and Thrashing Machines.—The following, dated January 31, 1899, has been received from Consul Marshal Halstead, of Birmingham:

I have to-day received the following inquiry: "We should be greatly obliged if you would kindly give us the names of a few American manufacturers of chaff cutters and thrashing machines for hand and horse power, as we have a very good market for same." I will be pleased to put the first firms responding into communication with the concern making the request.

United States Engines on British Railways.—The following, bearing date of Birmingham, January 27, 1899, has been received from Consul Marshal Halstead:

Alfred Palmer, a civil engineer, writes to the London Daily Mail as follows:

I venture to predict that the introduction upon the Midland Railway of American locomotives will ultimately result in the much-desired central self-coupling buffer and bogie system of rolling stock, as now used throughout the United States and Canada.

American locomotives, by having an elastic wheel base, are safer on the rails at high speed than ours, being better able to adapt themselves to inequalities of line and surface; but since the material used by and the workmanship of our engineers can not be excelled, we shall doubtless hear before very long of British firms receiving large orders from America for the "Yankee" type of locomotive.

Demand for Wire and Wire Nails in England.—Consul Marshal Halstead writes from Birmingham, February 4, 1899:

This morning I have received an inquiry from Wales for the names of American nut and bolt manufacturers, and also wire-nail makers. The bolt and nut names I have already supplied, but for wire-nail makers I must wait the response from the United States which should follow the publication of this communication in the CONSULAR REPORTS. I have also a request for the names of manufacturers producing wire for making wire nails.

United States Wheat in Spain.—Mr. Theodore Mertens, in charge of the United States consular agency at Valencia, writes, under date of January 20, 1899:

The great demand for wheat in this country and the present low price of this article in the United States, offer a rare opportunity to our grain-exporting merchants to sell large quantities to Spain until her own crops are ready for market. A steamer cargo of 4,000 tons of red winter wheat has just arrived here from New York, which has proved entirely satisfactory in quality, and importers are willing to receive more during the winter or spring. The price seems to compare favorably with that of Russian wheat (the kind generally imported here when there is a demand for foreign wheat), although American wheat pays 20 per cent higher duties than grain from countries which have a commercial treaty with Spain. This is the first direct shipment from the United States to this port since the war.

United States Meat in Sweden.—The following, dated January 23, 1899, has been received from Consul Bergh, of Gothenburg:

According to statistics furnished by the meat-inspection office of this city, 2,949 sides of salted pork have been imported from the United States during 1898, and trichinæ have been found in 23 pieces. Complaint is frequently made of packing of corned beef and horse meat, the barrels being of poor quality or carelessly handled by the cooper; so that the brine leaks out during transportation, and the meat arrives in a bad condition and is consequently condemned by the inspecting officer.

American Orders for German Woolens.—Under date of January 16, 1899, Consul Brundage, of Aix la Chapelle, reports as follows:

Mr. Carl Delius, the largest exporter of woolen cloth from this consular district to the United States, informed me last week that he had received sufficient orders from the United States to keep his mills in operation with full time for the next four months; in fact, he was compelled to refuse orders from Belgium and England. The other manufacturers are very cheerful in anticipation of many orders, per advice by their agents in New York. It occurred to me that these facts might be of some interest as general information. Evidently our present tariff does not exclude manufactured woolen products from America, for this district sent (in last quarter) over \$100,000 worth of woolen cloth.

American Apples in Aix la Chapelle.—Consul Brundage, under date of January 16, 1899, reports:

I am informed that, on account of the uncertainty of obtaining American apples from regular green-grocer dealers in Aix la Chapelle, due to the annoyance of customs examination, etc., it has been the custom for a few years for a number of gentlemen to club together and order a shipment of apples from the United States, and on arrival of same, to distribute to each person according to amount ordered, which is usually 2 to 5 barrels. Last week a consignment of 50 barrels was received here; each barrel was inspected, and in one barrel the dreaded "San José scale" was alleged to have been found. The apples in the barrel were disposed of according to law, viz, buried.

Lumber in Sweden.—Under date of January 23, 1899, Consul-General Winslow, of Stockholm, writes:

I submit a report gathered from eighty-eight lumber merchants, giving the amount of prepared timber on hand at the beginning of this year, as compared with the commencement of 1898:

At—	English standards.	
	1898.	1899.
The Gäfne district.....	65,113	55,531
Söderham.....	65,683	67,593
Hudiksvall.....	27,368	31,089
Sundsvall.....	108,806	106,914
Hernösand.....	101,374	107,280
Ume, Skellefte Pite, Lule, and Haparanda.....	130,058	134,427
Total.....	498,402	502,834

Stock Companies in Sweden.—Consul-General Winslow sends from Stockholm, January 11, 1899, a statement of the stock companies chartered in the Kingdom of Sweden for the year 1898. It appears that 420 were given licenses to transact business. The par value of their shares was \$27,000,000, and their paid-up capital was \$17,000,000. Of these corporations, 4 were insurance companies, 8 railway companies, 247 manufacturing concerns, 37 ship-chandler companies, 60 mercantile corporations, 2 banks with a capital of \$200,000 each, and 62 were engaged in various other enterprises. As compared with the year 1897, there was an increase of 230 corporations and a gain of \$12,000,000 in the par value of the stock.

Care of Children in German Schools.—Commercial Agent Stern writes from Bamberg, January 7, 1899:

A resolution which is well worthy of being imitated, and which ought to be widely circulated in the American press, has just been passed by the city council of Würzburg, Bavaria, the seat of a university. According to this resolution, the teeth of the poor pupils of the public schools of that city are to be examined and cared for free of cost, provided that the parents give their consent. It is intended to treat diseases of the ear and throat in a like manner, should the first experiment prove successful.

Fruit Exports from the Azores.—In a report for the Department of Agriculture (the full text of which has been transmitted thither), Consul Pickerill, of St. Michael's, under date of January 14, 1899, says that the exports of oranges, lemons, and tangerines in 1898 were as follows:

	Boxes.
Oranges.....	32,000
Lemons	100
Tangerines	3,000

In 1897, 40,000 boxes of oranges were exported. Boxes contain about 500 oranges each. The crops are decreasing, on account of continued dryness and the fact that growers are paying more attention to the cultivation of pineapples and of sweet potatoes for alcohol.

Egyptian Cotton Crop.—Consul-General Harrison writes from Cairo, January 17, 1899, that the estimate of the cotton crop reported by him in November, 1898*—6,000,000 cantars (588,300,000 pounds)—has been reduced by the Alexandria General Produce Association to 5,500,000 cantars (539,275,000 pounds) in consequence of continued unfavorable reports from the different cotton centers in the interior.

Paving in Ontario.—Consul Culver writes from London, January 25, 1899:

The subject of street paving is receiving considerable attention at this time in different municipalities throughout the Province of Ontario. Heretofore, not only in this city, but throughout the Province, cedar blocks have been extensively used; but the results have been far from satisfactory. Macadam for residence streets has

* See CONSULAR REPORTS No. 221 (February, 1899), p. 336.

proven good, and yet a more durable method is required. Asphalt, though not extensively used, except in the larger cities, has proven satisfactory when well put down; but brick has not yet been tried. I am informed that there is but one establishment in the Dominion (at Toronto) where paving brick is manufactured. The proper clay formation for manufacturing a first-class paving or fire brick is lacking in Canada. Our manufacturers would do well, I think, to establish agencies in different parts of the Dominion, where the material could be displayed and the cost ascertained.

Export Tax in the Society Islands.—Vice-Consul Hart, of Tahiti, under date of December 14, 1898, writes that an export tax on mother-of-pearl shells has been voted in the colony. The tax, which amounts to 250 francs (\$48.25) per 1,000 kilograms (2,204.6 pounds), is intended to promote trade with France and to be remitted when it is proved that shipments are intended to be used for manufacturing purposes in France. This will not become law until approved in France or sanctioned by the governor of the colony. If passed, adds Mr. Hart, it will injure trade with San Francisco, as shipments to that port have been large.

Increase in Export Duties in Martinique.—Mr. Testart, acting vice-consul at St. Pierre, writes, under date of January 4, 1899, that the general assembly has passed a resolution to the effect that after January 1, 1899, rum and tafia shall pay an export duty of 2.10 francs per 100 liters (41 cents per 106 quarts), instead of 1.10 francs per 100 liters, as heretofore.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
E. Schneegans, Saigon.....	Dec. 20, 1898	Rice market.....	Department of Agriculture.
Do	Jan. 3, 1899	.....do	Do.

FOREIGN REPORTS AND PUBLICATIONS.

British View of Germany's Industrial Development.—An elaborate report on the development of commercial, industrial, maritime, and traffic interests of Germany has recently been presented to the British Foreign Office by Mr. Gastrelli, commercial attaché to the British embassy in Berlin. He attributes the success of Germany commercially to the mercantile enterprise of the people and to their thoroughness. "This valuable characteristic," he says, "has permeated all classes of the people, and its effects can be seen in the manner of carrying out every private or national enterprise. No details are too insignificant to be considered in attaining a given end; no trouble is too great to take in mastering minutiae. There is no doubt whatever that in competing with other nations, it has been rather in consequence of a mass of small innovations than by great changes that they have succeeded in their national aspirations of becoming the most important commercial power on the Continent and inferior in the whole world only to Great Britain and the United States."

The writer compares the exports of German produce in 1897 (£176,030,200=\$856,650,968) with those of Great Britain (£234,219,708=\$1,140,830,209), or about a third more; the proportion of German trade per head of the population was about £3 6s. (\$16.06) and tends to rise, while that of Great Britain was £5 17s. (\$28.467) and tends to decline, the population of Germany being 53,000,000 and of Great Britain 40,000,000.

The tendency toward industrial cooperation in Germany has had a great influence on the development of the country. The industrial expansion has necessitated a gradual change in the German commercial policy. Since 1891, the general aim has been to secure, by tariff treaties, wider foreign markets, and to admit most raw materials free and food stuffs at reduced rates. The future position of Germany as a trading commercial nation will depend much on her attitude on January 1, 1904, when the tariff conventions with Austria-Hungary, Belgium, Italy, Roumania, Russia, Servia, and Switzerland will have expired, and when she can also be free of almost all other existing commercial treaties, by giving the stipulated notice. The Government began last year to collect material so as to be able to negotiate the new treaties. A new autonomous tariff is now

considered desirable, both on commercial grounds and because of technical deficiencies as regards the present classification of goods, which, it is said, places the Empire at a disadvantage in dealing with the more highly specialized tariffs of other governments. One great difficulty is the changing relative importance of agriculture and of industry as factors in national development. Statistics taken in 1882 and 1895 show that the number of persons out of every 1,000 supported by agriculture in the former year was 425, while in the latter it had fallen to 357, and that the contrary movement had taken place in industry. In 1882, 355 persons out of every 1,000 were supported by industry, which figures rose to 391 in 1895. The number of people supported by commerce had also increased from 100 to 115 out of every 1,000 of the total population.

Of the shipbuilding industry, Mr. Gastrell says, in part:

Among the many directions in which the German Empire has been pushing its economic expansion in recent years, none is more remarkable than the line of development of its maritime interests, in the broad sense of the term, which includes shipbuilding, carrying power, and over-sea commerce, together with its necessary protection as represented by a navy. * * * The Government has not largely subsidized or assisted in the construction of ships, as has been the case in other countries. It has merely followed the usual policy of affording a moderate amount of protection to the young home industry, in order to enable it to have a fair chance of competing with already existing foreign competitors. The most important form of subsidy is by postal contracts for mail services by quick steamers, though it is frankly acknowledged that other important objects are kept in view throughout, such as the indirect advantages that would accrue to German trade, the gain to the Empire by the increase of material for forming an efficient naval reserve, the utilization of the fast steamers as cruisers in time of war, and last, but not least, the coveted means of favoring home industries. Conformity with admiralty requirements, the use of German materials and products as far as possible (including coal), and the construction of the new vessels in the shipbuilding yards of the Empire are among the chief conditions of contract.

These subsidies, which are enjoyed by only two steamship lines—the North German Lloyd and the East African Line—amount at the present time to £324,500 (\$1,579,179) a year for direct postal subsidies, and to £19,250 (\$93,680) for other separate payments for carriage of all bags, chiefly to North America, by lines other than the two above mentioned. * * * German ships can be requisitioned under the law for war purposes. * * * There are, however, two other forms of assistance given, of which preferential, or special, railway freights for certain German materials for shipbuilding are the most important. * * * Certain specified articles for the fitting out of ships are also admitted duty free under various decrees. But independently of artificial stimulus, the progress of shipbuilding is yearly receiving greater encouragement, from the increasing improvement in methods of production and from the gradually extending facilities of carriage.

In his review of the traffic interests of Germany, Mr. Gastrell says that the country possesses 28,566 miles of broad-gauge railways and 8,647 miles of navigable water ways. Immense sums have been spent on canals, and there are many new projects, of which the

Dortmund-Rhine Canal and the Great Midland Canal (joining from the east to west the rivers Elbe, Weser, and Rhine) are the most important. A scheme of international importance is advocated by an "Austro-German society of inland water ways," consisting in the construction of a mid-European canal, which is intended to connect the Rhine, Elbe, and Oder with the Danube, with perhaps a branch to join the Russian canal system. The extension of the radius of cheaper water communication in Germany will further facilitate the exportation of industrial and mining products, and the vista opened up of future possibilities to the advantage of central Europe, the writer says, is immense.

The broad-gauge railways of Germany now belong almost entirely to the State; of narrow-gauge roads, there are (according to statistics of 1896-97) some 818 miles owned by private enterprise. Preferential rates are granted on the State railroads to certain goods, with the object of aiding agriculture and industry. The actual capital expended on the broad-gauge system up to 1896-97 was £580,186,600 (\$2,823,478,889), or about £20,310 (\$98,790) per mile. In 1897, the gross receipts were £79,399,850 (\$376,399,370), the working expenses £44,209,500 (\$215,145,532), and the excess of the receipts over the total expenditure yielded a return of 6 $\frac{3}{4}$ per cent on the invested capital.

Mr. Gastrell speaks of the interest taken in Germany in the Paris exhibition of 1900, and urges British traders to avail themselves of the opportunity afforded for showing their productions to the world. If British goods at the forthcoming exhibition are allowed to be inferior to those of Germany, he says, the result will be a serious injury to British trade. At this exhibition, for the first time, the same kinds of products from different countries will be shown alongside one another, so that deficiencies in any exhibits will be marked in the eyes of foreign customers.

Coal in Spain.—The *Moniteur Officiel du Commerce*, Paris, September 1, 1898, has the following table showing the production and consumption of coal in Spain, covering a period of four years:

Year.	Production.	Consumption.
	<i>Tons.</i>	<i>Tons.</i>
1894	1,659,274	3,500,014
1895	1,739,075	3,464,258
1896	1,852,947	3,735,540
1897	1,883,500	3,566,217

The production of coal in Spain in 1896 and 1897, according to provinces, was, in round numbers:

Province.	1896.	1897.
	<i>Tons.</i>	<i>Tons.</i>
Asturias.....	1,110,500	1,168,000
Cordoba.....	295,800	314,000
Seville.....	113,000	125,000
Ciudad Real.....	110,000	103,000
Palencia.....	130,000	94,000
Leon.....	51,200	51,000
Gerona.....	41,200	25,000
Burgos.....	480	500

There are 2,451 grants of coal mines, of which only 634 are worked, and the supply is completed by annual importations to the value of some \$300,000.

Trade Openings in Siberia.—The Board of Trade Journal, London, January, 1899, quotes the following from the London and China Telegraph:

A German firm has one of the largest establishments in the town of Blagovestchensk. The premises consist of a handsome building of brick, arranged so as to look like stone, with lofty showrooms and electric light within and without. It is like most shops of any importance in Siberia—a general shop where groceries and stationery, clothes and machinery, and all manner of other goods may be bought. They do business wholesale as well as retail. The same firm has a depot in the next province westward, at Strelensh; and at Vladivstock its establishment is, it is said, larger than the one at Blagovestchensk. In the same square is a large Russian shop of the same kind, and not far off a French firm carries on a retail business, especially in perfumery, French preserves, and ladies' hats. It appears strange that no Englishman should make an attempt in such a fast-growing city of some 50,000 inhabitants as Blagovestchensk, with a frontage to the Amur of 6 or 7 miles, another river (the Zega) as its eastern side—a city which is beginning to turn the wooden buildings in its splendidly broad streets into brick, if not into stone.

Leather in Russia.—The Moniteur Officiel du Commerce, Paris, November 19, 1898, says that Russia imported 1,619,821 poods (58,494,796 pounds) of hides in 1896, valued at about 10,115,500 rubles (\$5,209,483), from the following countries:

Country	Value.	
	<i>Rubles.</i>	
Germany.....	4,968,927	\$2,558,997
United States.....	644,367	331,849
Great Britain.....	622,978	320,834
Austria-Hungary.....	496,711	255,806
France.....	483,161	248,808
Netherlands.....	426,454	219,624

The importation of dressed skins in 1896 was 157,869 poods (5,700,965 pounds), valued at 4,231,473 rubles (\$2,179,209). Of these imports, Germany claims 52 per cent of the hides and 40 per cent of dressed skins.

The German merchant gives long credits and conforms to the tastes of his clients; for instance, in shagreens, the Russian prefers the brightest tints. In this way the German has gained possession of the market for medium qualities and prices. The commerce of exportation has also some importance. Of raw skins, 412,000 poods (14,878,144 pounds) were exported in 1896, valued at about 3,625,000 rubles (\$1,866,875), divided as follows:

Country.	Value.	
	Rubles.	
Germany	2,680,000	\$1,380,200
France.....	333,000	171,495
Austria-Hungary	229,000	117,935
Great Britain.....	217,000	111,755

The fair held annually at Nizhni Novgorod is an important market for leather. The province of Kazan exports great quantities of kid, goat, sheep, and horse skins.

Trade of Hawaii in 1898.—A British Foreign Office report (No. 2,205, annual series) says that the imports into the Hawaiian Islands in the first nine months of 1898 were as follows:

Description.	1898 (9 months).	1897 (9 months).
Goods free by treaty.....	\$3,959,413.30	\$3,031,375.83
Goods free by civil code.....	*1,500,998.08	1,265,632.38
Goods and spirits paying duty.....	1,796,627.77	1,582,503.01
Goods and spirits bonded.....	103,541.41	100,746.27
Total.....	7,360,580.56	5,980,257.49

*Including specie.

Much of the increase, says the report, is no doubt due to the numerous arrivals of men and ships during the year and the consequent demand for increased supplies of all descriptions, and also to the opening up of new plantations. The increase, however, if continued for the same rate for the rest of the year, would fall below the increase of 1897 over 1896 in dutiable goods and in goods free by civil code, and largely exceed it in goods free by treaty, which all come from the United States.

The revenue for the year 1898, from import duties and port charges is stated to be over \$890,000.

Commerce of Hongkong in 1897.—The *Moniteur Officiel du Commerce*, Paris, December 22, 1898, has the following:

The importations into the port of Hongkong in 1897 amounted to 3,278,310 tons, carried by 33,963 vessels of a total tonnage of 7,782,320 tons. There were 33,784 vessels, of a total tonnage of 7,783,515 tons, which transported from Hongkong 2,777,323 tons of merchandise and 445,992 tons of coal.

The following table shows the principal articles imported in European boats for the years 1896 and 1897:

Articles.	1896.	1897.
	Tons.	Tons.
Oleaginous grains.....	250	.....
Bones.....	3,660	.....
Coal.....	539,721	601,544
Cotton thread and raw cotton.....	11,090	30,581
Flour.....	85,021	85,904
Manila hemp.....	32,790	43,360
Petroleum:		
In tanks.....	41,758	47,782
In cans.....	44,129	60,346
Lead.....	915	5,476
Opium.....	2,299	2,531
Resin.....	.....	1,700
Rattan.....	3,140	2,920
Rice.....	704,530	361,130
Sandalwood.....	3,707	3,459
Sulphur.....	220	2,040
Sugar.....	186,759	211,777
Tea.....	5,447	5,929
Building wood.....	49,363	64,862
Other.....	1,077,090	1,211,700
Total.....	2,791,889	2,743,061
Goods in transit.....	1,845,400	1,852,462
Grand total.....	4,637,289	4,595,523

The transit trade shows an increase of 7,062 tons of merchandise.

Copper in Bolivia.—An article in the *Moniteur Officiel du Commerce*, Paris, December 8, 1898, is summarized as follows:

The Bolivian copper formations extend in an almost uninterrupted line from south to north, following the general direction of the eastern chain of the Andes. The only beds worked to-day are those of Corocoro, upon the high plateau of Titicaca. The distinctive feature of these beds is the abundance of native copper, in forms varying from microscopic grains to great masses weighing several tons; in wealth, they rank second only to those of Lake Superior. The most primitive and imperfect methods of working these beds are employed. The scarcity of fuel does not permit fusion on a large scale of the different chemical combinations of the metal. As a matter of fact, there are only two furnaces at Corocoro. The ore is broken with

hammers by women, passed through mills worked by hand or by hydraulic power, undergoes two washings in inclined trenches, and finally is dried either by the sun or by artificial heat. The ore produced is of a standard of not less than 70 per cent. The quantity extracted in 1897, as given by the four companies of Corocoro, was 2,912,566 kilograms (6,421,343 pounds). The Bolivian Government taxes every Spanish quintal (101 pounds) of ore 9.6 cents. The net cost of a Spanish quintal of copper at Corocoro is \$2.80 to \$2.90.

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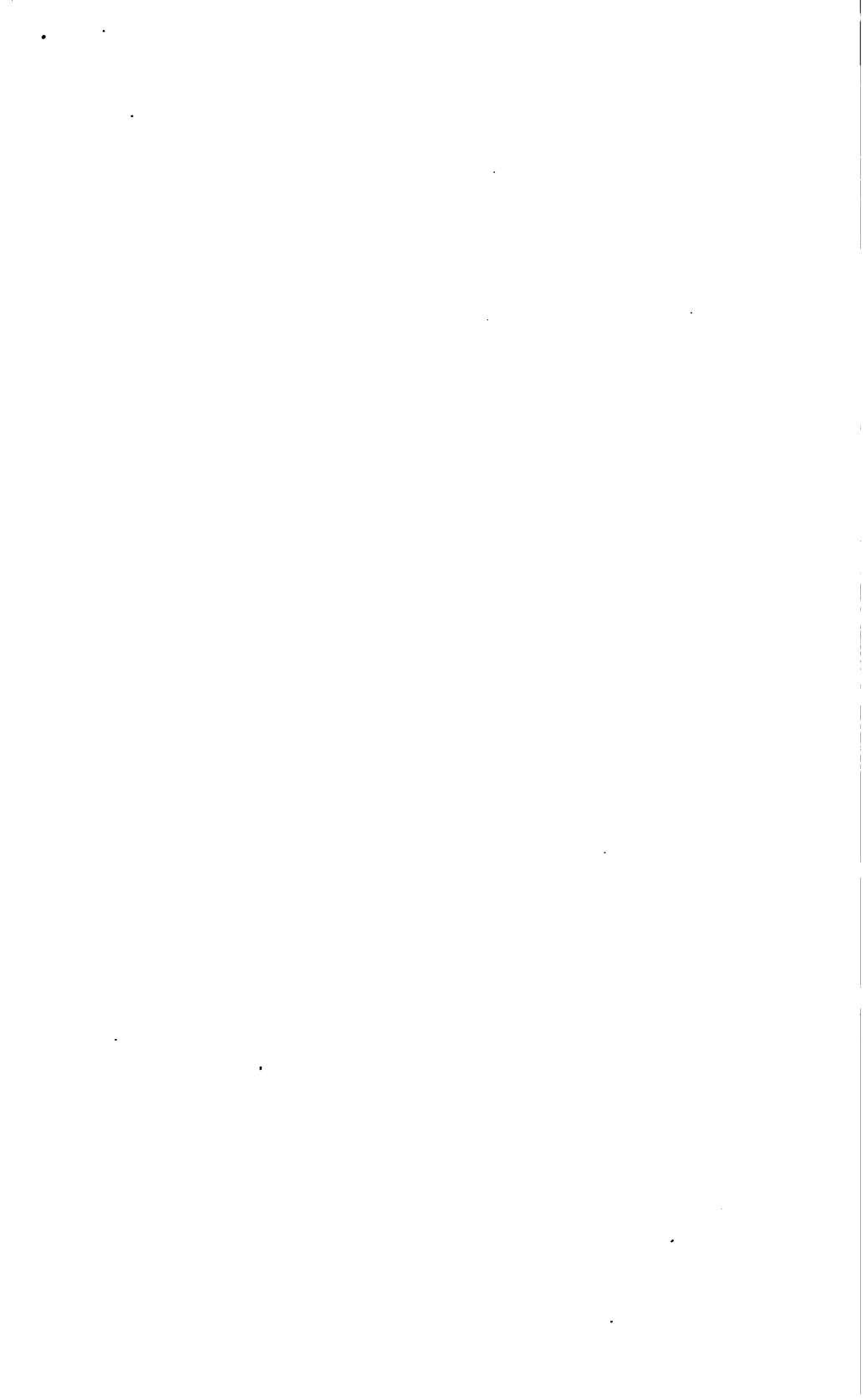
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